First reviewed: March 28, 1991
Recommend: N

Received:
Reviewed: 12/17/91
by G. Ferreira
Recommend: NFRAP

200505

PRELIMINARY ASSESSMENT

Dietrichs Industrial

LITTLE FERRY BOROUGH, BERGEN COUNTY

EPA ID No.: NJD986603686

New Jersey Department of Environmental Protection
Division of Hazardous Waste Management
Bureau of Planning and Assessment

DIETRICHS INDUSTRIAL SITE
DIETRICHS STREET
LITTLE FERRY, BERGEN COUNTY, NEW JERSEY
EPA ID # NJD986603686

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GENERAL INFORMATION AND SITE HISTORY

Dietrichs Industrial is a 8.76-acre site identified as Block 107, Lots 2.01 and 17 on the municipal tax map. The site is bordered to the north by Dietrichs Street, to the east by the Hackensack River, to the south by a former Andrill Oil Corporation tank farm (now vacant land) and to the west by residential homes.

The owners of the site have been as follows:

1974-1980	Industrial Center of Little Ferry Inc.
1980-1988	Nejer Development Inc.
March 1988-May 1988	Maiden Lane Corporation
May 1988-Present	Frank M. & Margaret M. Notarangelo

There are approximately 35,200 residents within 1 mile of the site and an estimated 303,000 reside within 4 miles of the site.

The subject site was the location of the Little Ferry Sewage treatment plant from approximately 1940 to 1961. No other operations are known to have been conducted on site. The area is zoned for general industrial use.

SITE OPERATIONS OF CONCERN

On April 20, 1987 Nejer Development submitted to the New Jersey Department of Environmental Protection (NJDEP), Division of Hazardous Waste Management (DHWM), Bureau of Industrial Site Evaluation (now known as the Bureau of ECRA Applicability and Compliance) an affidavit to obtain an applicability/ nonapplicability determination from the NJDEP pursuant to the Environmental Cleanup Responsibility Act (ECRA). The affidavit was submitted in preparation of sale of the property to Town and Country Developers, Inc. (This sale was not executed because title and deed records indicate the property was sold by Nejer Development to Maiden Lane Corporation on March 1, 1988.) The affidavit stated that the property has been vacant since the mid 1960s. Prior to this time, the property was the site of a Little Ferry sewage treatment plant. Subsequent to the plant closure and demolition, the site was filled with miscellaneous material from various sources.

On March 25, 1988 Maiden Lane Corporation submitted to the NJDEP, DWHM, ECRA an applicability/nonapplicability affidavit. This was done in preparation of sale of the site to Frank and Margaret Notarangelo. The operations at the site were listed as vacant land. The previous owner was listed as Nejer Development and their operations were also listed as vacant land.

On April 5, 1988 the NJDEP, DHWM responded to the affidavit with a letter of nonapplicability stating that this decision was made in light of the absence of an industrial establishment as defined within the Standarad Industrial Classification numbers covered by the Act.

A February 22, 1989 letter from the Little Ferry Planning Board Clerk to NJDEP, DHWM, Bureau of ECRA Applicability and Compliance stated, "various chemicals were dumped on this site." According to a letter dated February 28, 1989 from the Little Ferry Planning Board Clerk to the NJDEP, DHWM, the property was the site of a sewer plant operated by the Borough between approximately 1930 and 1957.

On April 1, 1989 soil samples were collected from seven locations at the site by Allied Environmental Industries Corporation of Fairfield, New Jersey. This sampling was conducted in response to a citizen complaint that drums were disposed of on site some 30 years ago. The town removed the drums but the contents of the drums were unknown. The samples were analyzed for volatile organic compounds (VOCs) and petroleum hydrocarbons (PHCs). The results of the sample analysis indicated the presence of PHCs at five locations ranging from 15 parts per million (ppm) to 514 ppm. Current Township officials stated that they had no knowledge of dumping occurring on site. For a detailed discussion of this sampling episode, see the Soil Section of this report.

According to the Hackensack Meadowlands Development Commission (HMDC) Project Manager for Dietrichs Industrial, the actual location of the Little Ferry Sewage Treatment Plant was directly south and adjacent to the subject site. The HMDC Project Manager also stated that he had received allegations of chemical dumping, but after inspecting the property concluded that there was no reason to believe that chemicals were disposed of on site.

On April 8, 1991 the NJDEP, DHWM, Bureau of Planning and Assessment (BPA) personnel conducted a Pre-Sampling Assessment (PSA) of the subject site. BPA personnel were met by Bill Fourgerel, a representative for the owner, and Lois Spagnola, the environmental consultant for the owner. The following information was obtained during the PSA. The property is covered with demolition debris from an unknown source. Vehicle access to the property is now restricted by a pile of dirt at the entrance; this was done in attempt to prohibit further dumping. No evidence of drums, chemical dumping or areas of stressed vegetation were noted. Readings greater than 1,000 ppm as calibrated to methane were noted on the Organic Vapor Analyzer (OVA) in the area adjacent to the river. The slam bar was coated with an oil like substance when it was pulled out of the ground in the area adjacent to the river, and a petroleum hydrocarbon odor was noted. Only one reading of 3 ppm as calibrated to benzene was detected on the HNu Photoionization Detector (HNu).

BPA personnel were also met by the Project Manager for the Hackensack Meadowlands Development Commission. The Project Manager stated that the property adjacent to the site was the Andrill Oil Corporation, a tank farm that underwent an ECRA cleanup (ECRA Case #84117) in 1987. According to the ECRA case manager, a major soil remediation occurred at Andrill to remove soils contaminated with PHCs. Groundwater was also contaminated with PHCs and base/neutrals. Andrill may be a potential source of the PHC contamination of the subject site.

On April 17, 1991 NJDEP, DHWM, BPA personnel conducted an historical aerial photograph review of the subject site. Photographs taken in 1940, 1951, 1953, 1961, 1972, 1974 and 1978 were reviewed. The 1940 through 1961 photograph cleary showed that a sewage treatment plant was operated on site during those years. Several buildings, tanks, piping and three setting lagoons with separators were visible in the photographs. The 1961, 1972 and 1974 photographs revealed many areas of solid waste debris with many objects which appear to be 55-gallon drums. Disturbance and stressed vegetation were also visible in the 1972 and 1974 photographs. Only three drum-like objects appear in the 1978 aerial photograph.

On May 23, 1991 NJDEP, DHWM, BPA personnel conducted a second PSA to determine if sampling is warranted in the areas of drum disposal discovered in the 1961, 1972 and 1974 aerial photographs. No evidence of drums, chemical dumping or areas of stressed vegetation were noted. No readings were detected on the HNu or OVA.

GROUNDWATER ROUTE

A series of six soil borings were made on the site in August 1972, two in January 1984 and three additional borings were completed in June 1988 by Johnson Soils Engineering Company of Ridgefield, New Jersey. The borings were made in preparation of construction of a warehouse.

The soil borings revealed that the site lies within an area designated as tidal marsh of marine origin, composed of silty clays deposited during the recession of the Wisconsin glacier. The site has been filled with miscellaneous fill consisting of cinders, sand, silt, wood, bricks, etc. The fill depths ranged from 2 to 12 feet. Organic silt and/or peat was encountered below the fill material. Silty sand was encountered below the organic layers. Below the fill, organic and sand layers, typical varved silt and clay formations of the Meadowlands were encountered. A varve is an annual deposit usually consisting of two layers, one of fine materials and the other of coarse.

Glacial till formations, consisting of red brown silty gravelly sand, were encountered below the varved silt and clay at depths of 85 to 91.5 feet. Till is an unsorted mixture of sand, gravel, silt and clay deposited directly from the ice. The thickness of the till is variable; it averages 25 feet and is known to exceed 165 feet locally in the meadows area. Till covers almost all the bedrock in the Hackensack River Basin.

Bedrock in the Hackensack River Basin is composed of sedimentary and igneous rock of the Newark Group of Triassic age. The Brunswick Formation of the Newark Group is composed of mudstone, siltstone and sandstone and is the most important bedrock aquifer in the basin. Water occurs in this formation in a network of interconnected openings formed along joints, fractures and solution openings. The zone in the Brunswick Formation that contains fresh-water-bearing openings is generally less than 200 feet thick in the main valleys of the Hackensack River.

The Stockton and Lockatong Formations of the Newark Group have very limited aerial extent and are not important aquifers in the basin.

There are no monitoring wells on site.

There are no public supply wells within 1 mile of the site. Public supply wells within 4 miles of the site are as follows:

WELL OWNER	DEPTH (ft.)	GEOLOGIC FORMATION	DISTANCE FROM SITE (mi)
Hackensack Water Company	550	Brunswick	2.2
Hackensack Water Company	350	Brunswick	2.7
Hackensack Water Company	235	Brunswick	2.6
Hackensack Water Company	168	Stratified Drift	4.0
Hackensack Water Company	190	Stratified Drift	4.0
Lodi Borough	300	Brunswick	3.8
Lodi Borough	307	Brunswick	3.7
Lodi Borough	300	Brunswick	3.7
Lodi Borough	332	Brunswick	3.7
Lodi Borough	373	Brunswick	2.9
Lodi Borough	409	Brunswick	3.1
Lodi Borough	607	Brunswick	3.8
Lodi Borough	459	Brunswick	3.7
Lodi Borough	470	Brunswick	3.2
Wallington Borough	400	Brunswick	3.9
Wallington Borough	400	Brunswick	3.4

The Hackensack Water Company maintains five wells located within 4 miles of the site. Hackensack Water Company operates an interconnected system of wells which serve approximately 750,000 people. These wells are not currently in service due to operational considerations and are only used in time of drought. The other wells in this system are located more than 4 miles from the site.

According to a 1987 NJDEP, Division of Water Resources (DWR), Bureau of Enforcement and Regulatory Services (BERS) Compliance Evaluation Inspection Report, Lodi Borough Water Department has closed its wells due to volatile organic contamination. Passaic Valley Water Commission has assumed operational responsibility via a contractual agreement.

According to a 1990 NJDEP, DWR, BERS Compliance Evaluation Inspection Report, Wallington Borough Water Department's municipal wells are permanently out of service due to volatile organic contamination. Wallington Borough purchases water from the Passaic Valley Water Commission.

The private potable wells located within 1 mile of the site are as follows:

DISTANCE/DIRECTION FROM SITE (mi)	DEPTH (ft.)
0.75/NW	130
0.50/SW	180
0.80/SW	101 *
0.80/SW	unknown

DISTANCE/DIRECTION FROM SITE (mi)	DEPTH (ft.)
0.80/SW	120
1.0/SE	90

* Well is used for sprinkling and washroom because the water has a fuel oil taste and odor.

Numerous industrial wells are located within 4 miles of the site.

No permits were issued to any owner of the site for a discharge to groundwater.

A potential for groundwater contamination due to past site operation exists if the soil is contaminated with petroleum hydrocarbons as indicated by the April 1989 soil sampling previously mentioned. Also, groundwater may become contaminated with compounds other than PHCs due to the drum disposal that was noted in the 1961, 1972 and 1974 aerial photographs.

SURFACE WATER ROUTE

The site is bordered to the east by the Hackensack River. The Hackensack River originates in New York State and flows south for approximately 11 miles before entering Newark Bay. This region of the state is very populated; major cities downstream of the site include Secaucus and Jersey City. The major impoundments on this river, Oradell Reservoir, Lake Tappan and Woodcliff Reservoir are all located upstream from the site.

Much of the lower Hackensack watershed is tidal marshes known as the Hackensack Meadowlands. During the summer months, particularly when precipitation is deficient, brackish water from Newark Bay flows up the Hackensack River with chloride concentrations as high as 4,000 mg/l found as far north as Hackensack. This high concentration of chloride makes the water in the lower Hackensack unsuitable for potable and industrial purposes, although it is usuable for cooling purposes. About 50 percent of the land use in this watershed is undeveloped, with more than 30 percent being residential. The remainder is commercial/industrial. Waters in the lower Hackensack have been classified Saline Estuarine-2 (SE-2) and SE-3 waters. SE-2 (Saline) waters only have to meet water quality criteria for secondary contact recreation, while SE-3 waters have to allow for secondary contact recreation and the maintenance/migration of fish (not propagation).

A large number of industrial and municipal wastewater dischargers are present in the lower watershed. Twenty-six dischargers in the watershed, which are under enforcement action, are having deleterious impacts on stream water quality. Problems range from raw sewage by-passes, to illegal discharges and exceeding permit limitations. In addition, nonpoint pollution contributions from urbanized and industrial areas; landfills and sediment oxygen demand are also considered to be significant.

Based on the Hackensack Meadowlands Development Commission's sampling of the tidal Hackensack and tributaries, this region is not considered to be meeting the designated uses for SE-2 and SE-3 waters. There has been no surface water sampling relative to this site.

The Hackensack Water Company has two surface water intakes on the Hackensack River. Both of these intakes are located in New Milford which is approximately 9 river miles upstream from the subject site. There are no known surface water intakes downstream of the site.

The following freshwater wetlands are located within 1 mile of the site: palustrine broad-leaved deciduous scrub/shrub, palustrine broad-leaved deciduous forested, palustrine emergent, palustrine open water and lacustrine limnetic open water. The following coastal wetlands are located within 2 miles of the site: estuarine intertidal flat, estuarine intertidal emergent, estuarine intertidal broad-leaved deciduous scrub/shrub and estuarine subtidal open water.

Federal and state threatened or endangered species in the vicinity of the site may include the pied-billed grebe, the yellow-crowned night heron, the American bittern, the northern harrier, the least tern, the sedge wren and the grasshopper sparrow.

A potential for surface water contamination exists due to run off of petroleum hydrocarbon contaminated soil. Also, soils may be contaminated with compounds other than PHCs due to the drum disposal that was noted in the 1961, 1972 and 1974 aerial photographs.

AIR ROUTE

There have been no air pollution control certificates issued relative to this site. A potential for air contamination does not exist as the site is inactive.

SOIL

On April 1, 1989 soil samples were collected from seven locations (see site map) by Allied Environmental Industries Corporation of Fairfield, New Jersey. The samples were analyzed by Veritech Laboratories of Butler, New Jersey, NJDEP Laboratory No. 14622. Groundwater was discovered at approximately 4 feet below grade, except for Sample Location 1 (LFS 1), where it was found to be approximately 6 feet below grade. Therefore, samples included a composite of soils above and below groundwater levels encountered during sampling. Two samples were collected from Location 1 in order to determine whether there was a discrepancy in contamination levels at greater depths. The samples were analyzed for petroleum hydrocarbons (PHCs) and volatile organic compounds (VOCs).

According to the April 14, 1989 sampling report written by the President of Allied Environmental Industries Corporation, "the property is overgrown, with no visible signs of dumping; however, construction debris and rubbish were found in Locations 4A through 7A."

The following lists all sampling results:

SAMPLE #	COMPOSITE DEPTH (ft.)	ANALYSIS	RESULTS (ppm)
LFS 1A	0-4	PHC	ND
		VOC	ND
LFS 1B	0-6	PHC	ND
		VOC	ND

SAMPLE #	COMPOSITE DEPTH (ft.)	ANALYSIS	RESULTS (ppm)
LFS 2A	0-4	PHC	15
		VOC	ND
LFS 3A	0-4	PHC	167
		VOC	ND
LFS 4A	0-4	DHC	20
		VOC	ND
LFS 5A	0-4	PHC	30
		VOC	ND
LFS 6A	0-4	PHC	ND
		VOC	ND
LFS 7A	0-4	PHC	514
		VOC	ND

ND = Non-detected

As the data illustrates, no VOCs were detected at any of the sample locations; PHC concentrations were detected to 514 ppm. The NJDEP soil action level is 100 ppm for PHCs. The highest level of PHCs was found in the area closest to the Hackensack River. It should be noted that asphalt was encountered in much of the debris. Also noted on the sampling report was "the former, presence of aboveground oil storage tanks to the south of the property and the presence of contaminated debris on the site."

The President of Allied Environmental Industries Corporation drew the following conclusions/recommendations based on the sampling results:

"The PHC results found were relatively low and are most probably present in this and all sites fronting the Hackensack River. The results were below the levels which the NJDEP uses to determine whether oil-contaminated soil can be disposed of in state, which is 30,000 mg/kg. Typically in cases such as this, the NJDEP would not require remediation of the soils because the area would become recontaminated as a result of continuous flooding by the Hackensack River. Based on site inspections, soil boring and analytical results, it is the opinion of Allied Environmental Industries Corporation that this property is of minor environmental concern."

Although 30,000 ppm may be the level at which soil can be disposed of in state, it in no way represents the NJDEP action level for soil which is 100 ppm for petroleum hydrocarbons.

DIRECT CONTACT

No incident of direct contact with hazardous substances has been reported. No potential for direct contact exists as the site is inactive and access to the property is restricted by dirt piled at the entrance.

FIRE AND EXPLOSION
No incidents of fire or explosion have been reported.

A potential for fire and/or explosion does not exist as the site is inactive and no hazardous or flammable materials are stored on site.

ADDITIONAL CONSIDERATIONS
There has been no reported damage to flora, fauna or off-site property; however, a potential exists if soil/subsurface contamination is present on site.

ENFORCEMENT ACTIONS
No enforcement actions were issued against the current or previous owners of the site.

PRIORITY DESIGNATION
Based on information obtained for this report, Dietrichs Industrial Site is designated a medium priority. The aerial photography revealed a sewage treatment plant on site from approximately 1940 to 1961. Also, the 1961, 1972 and 1974 photographs revealed illegal dumping including drum disposal.

RECOMMENDATIONS
No evidence of chemical dumping was found by the Hackensack Meadowlands Development Commission or by NJDEP, DHWM, BPA personnel during the April 8 or May 23, 1991 PSAs. No VOCs were detected in the samples that were collected in April 1989. Although PHCs were detected in the April 1989 samples, background levels of PHCs may be elevated due to the highly industrialized nature of the surrounding area. Readings greater than 1,000 ppm as calibrated to methane were noted on the OVA during the April 8, 1991 NJDEP, DHWM, BPA PSA. However, the elevated readings were noted in the portion of the property that was swamp. Methane is naturally occurring in subsurface wetlands environments. Sampling of this site is not warranted at this time. If evidence that the drums shown in the aerial photographs contained hazardous submstances and a release occurred becomes available, sampling may be necessary to delineate the extent of contamination.

Submitted by:

Karen Schug Hiering
HSMS IV
Bureau of Planning and Assessment
April 10, 1991

MAPS

SCALE 1:24000

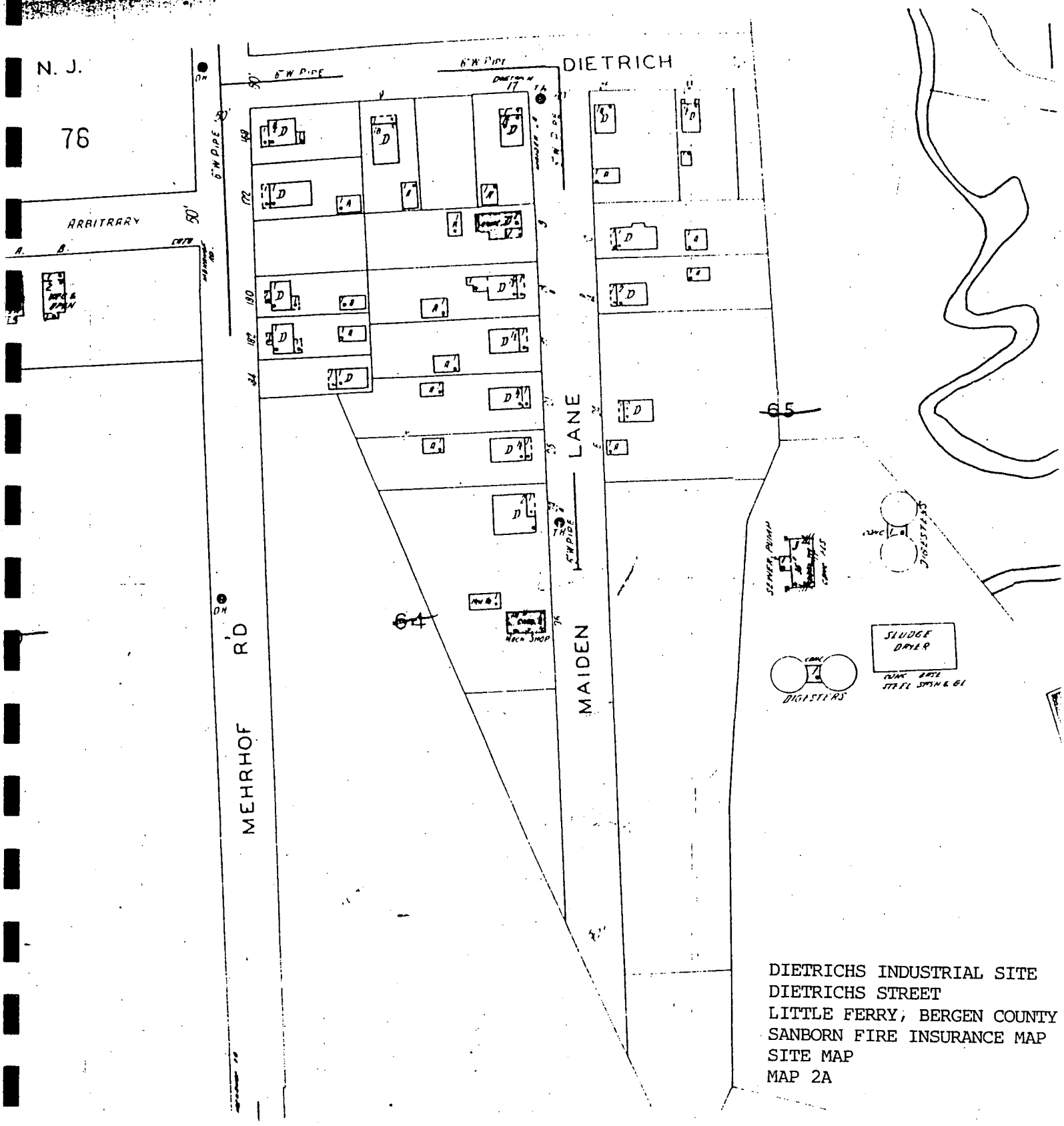
1 ½ 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETER

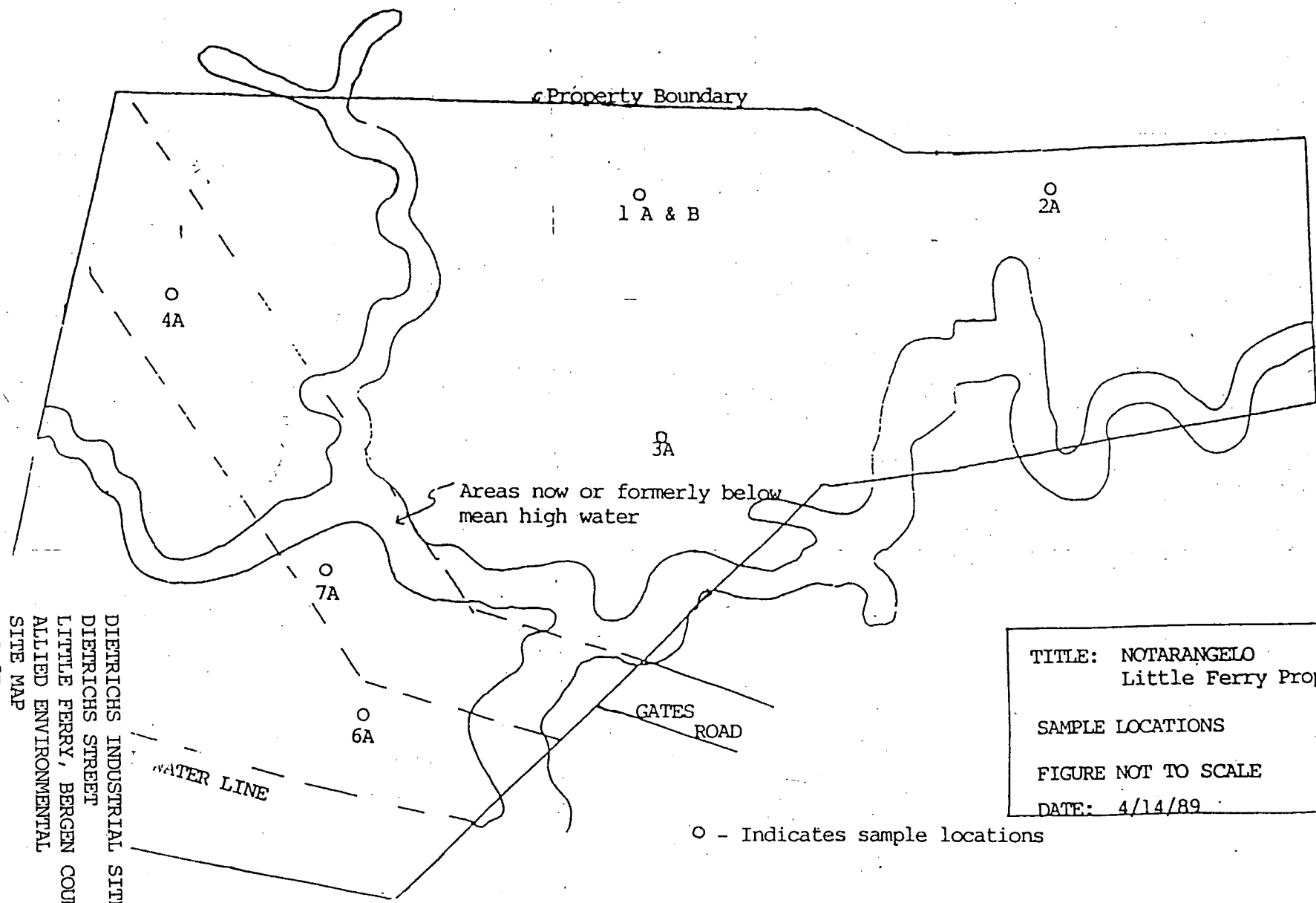
CONTOUR INTERVAL 20 FEET
DATUM IS MEAN SEA LEVEL

DIETRICHS INDUSTRIAL SITE
DIETRICHS STREET
LITTLE FERRY, BERGEN COUNTY
LATITUDE: 40 50' 27"
LONGITUDE: 74 02' 07"
USGS TOPOGRAPHIC MAP
MAP 1



DIETRICHS INDUSTRIAL SITE
DIETRICHS STREET
LITTLE FERRY, BERGEN COUNTY
SANBORN FIRE INSURANCE MAP
SITE MAP
MAP 2A

ALLIED ENVIRONMENTAL INDUSTRIES CORP.
271 ROUTE 46 WEST • SUITE D201
FAIRFIELD, NEW JERSEY 07006



DIETRICHS INDUSTRIAL SITE
DIETRICHS STREET
LITTLE FERRY, BERGEN COUNTY
ALLIED ENVIRONMENTAL
SITE MAP
MAP 2B

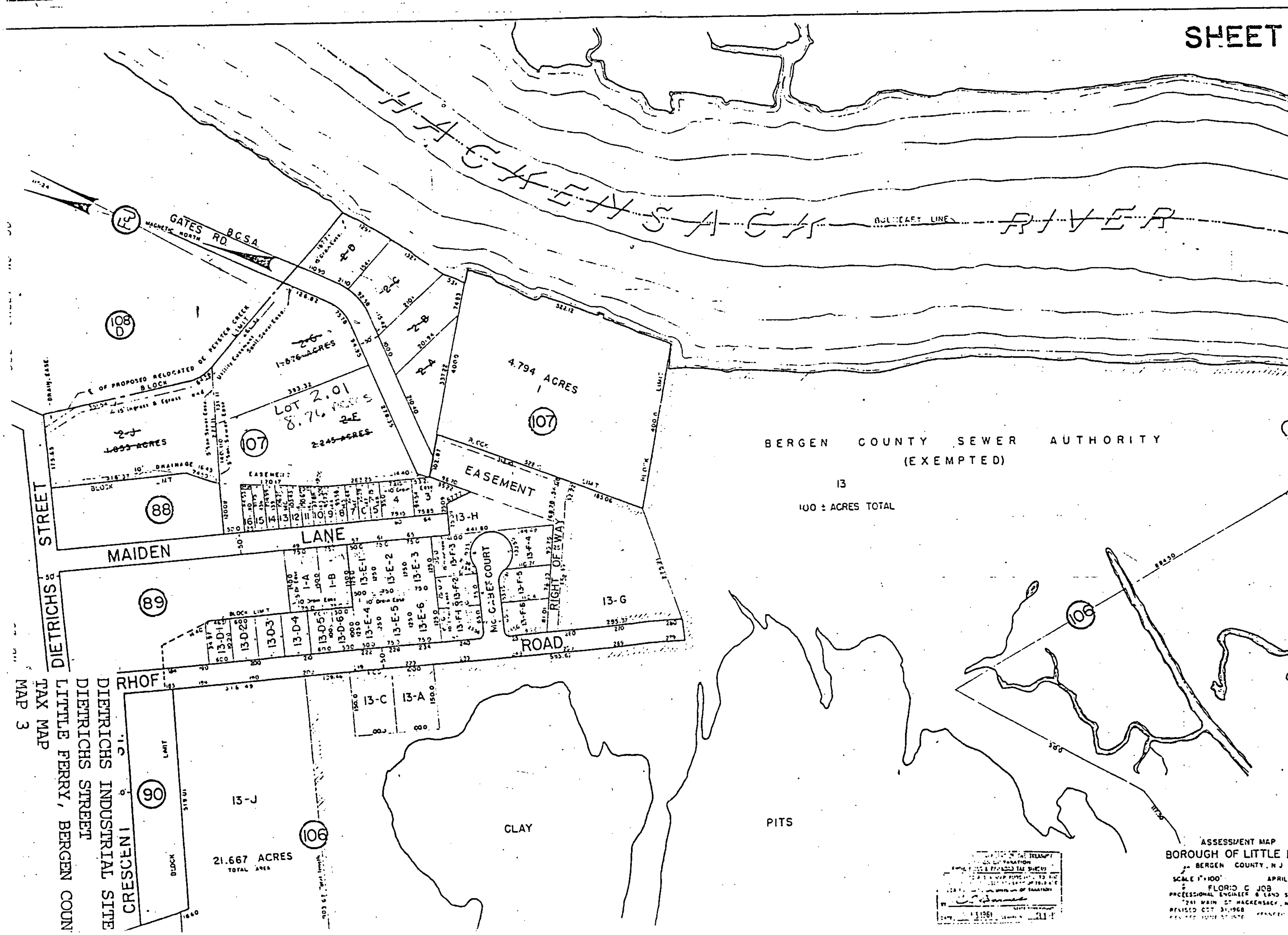
TITLE: NOTARANGELO
Little Ferry Property

SAMPLE LOCATIONS

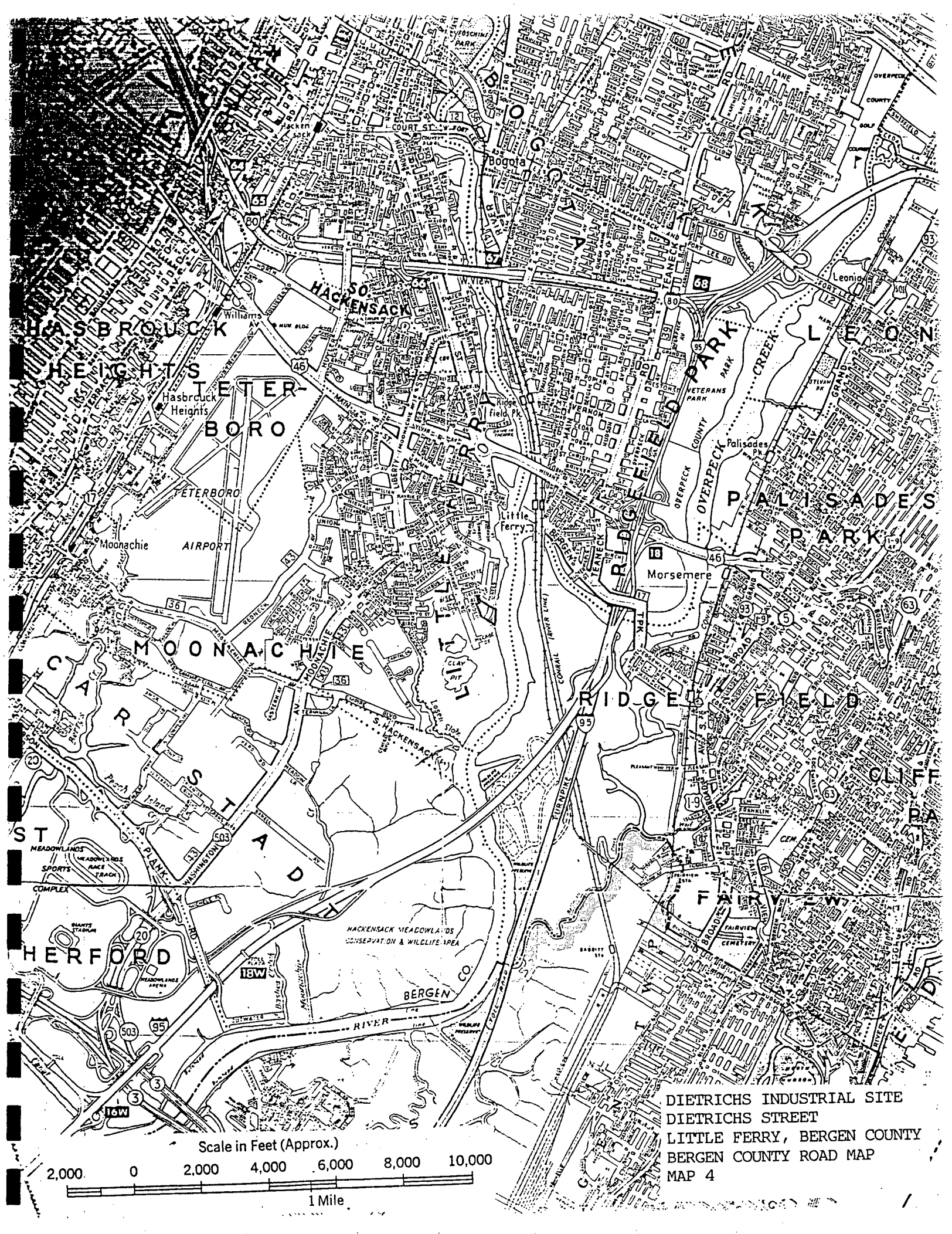
FIGURE NOT TO SCALE

DATE: 4/14/89

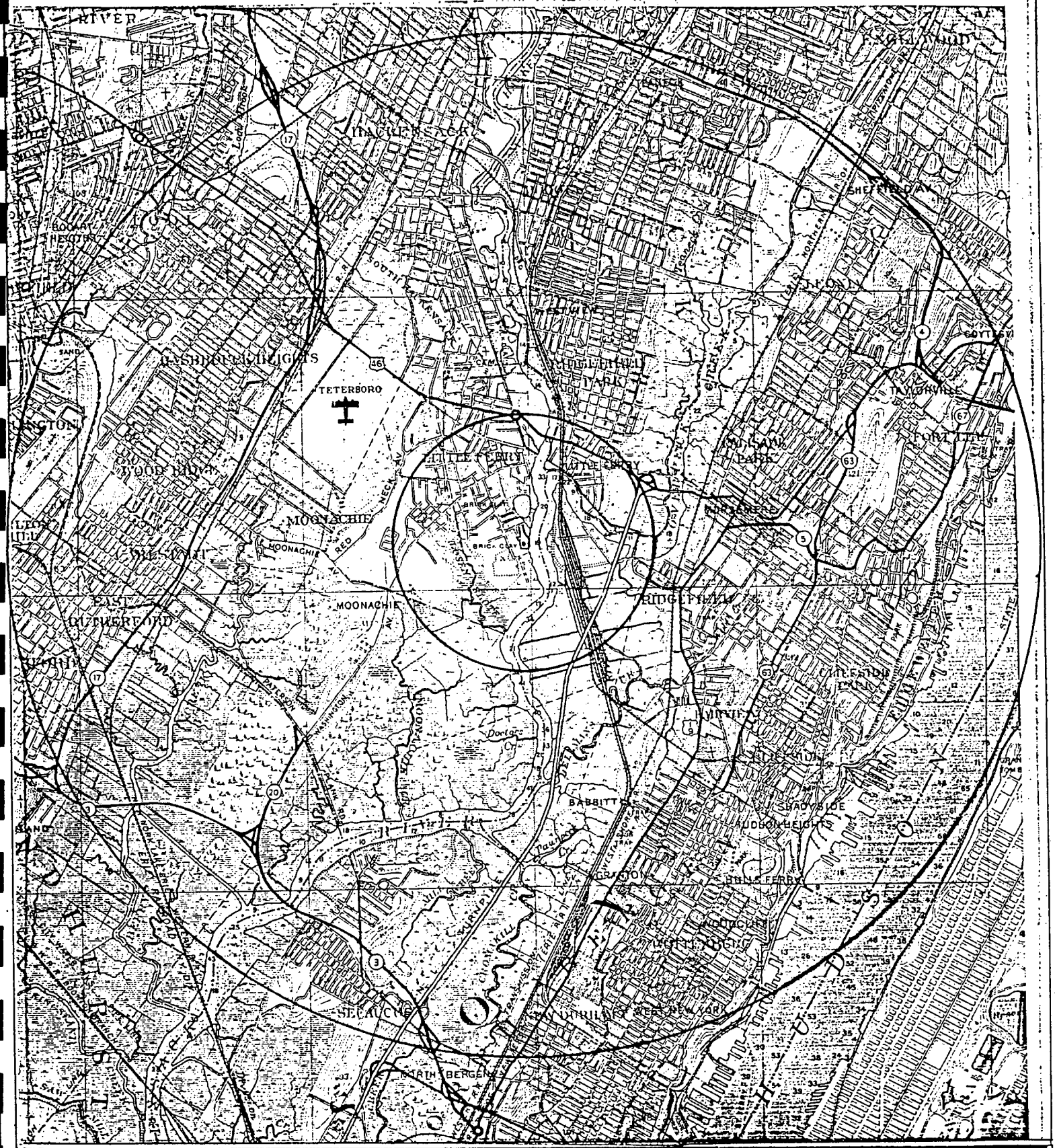
O - Indicates sample locations



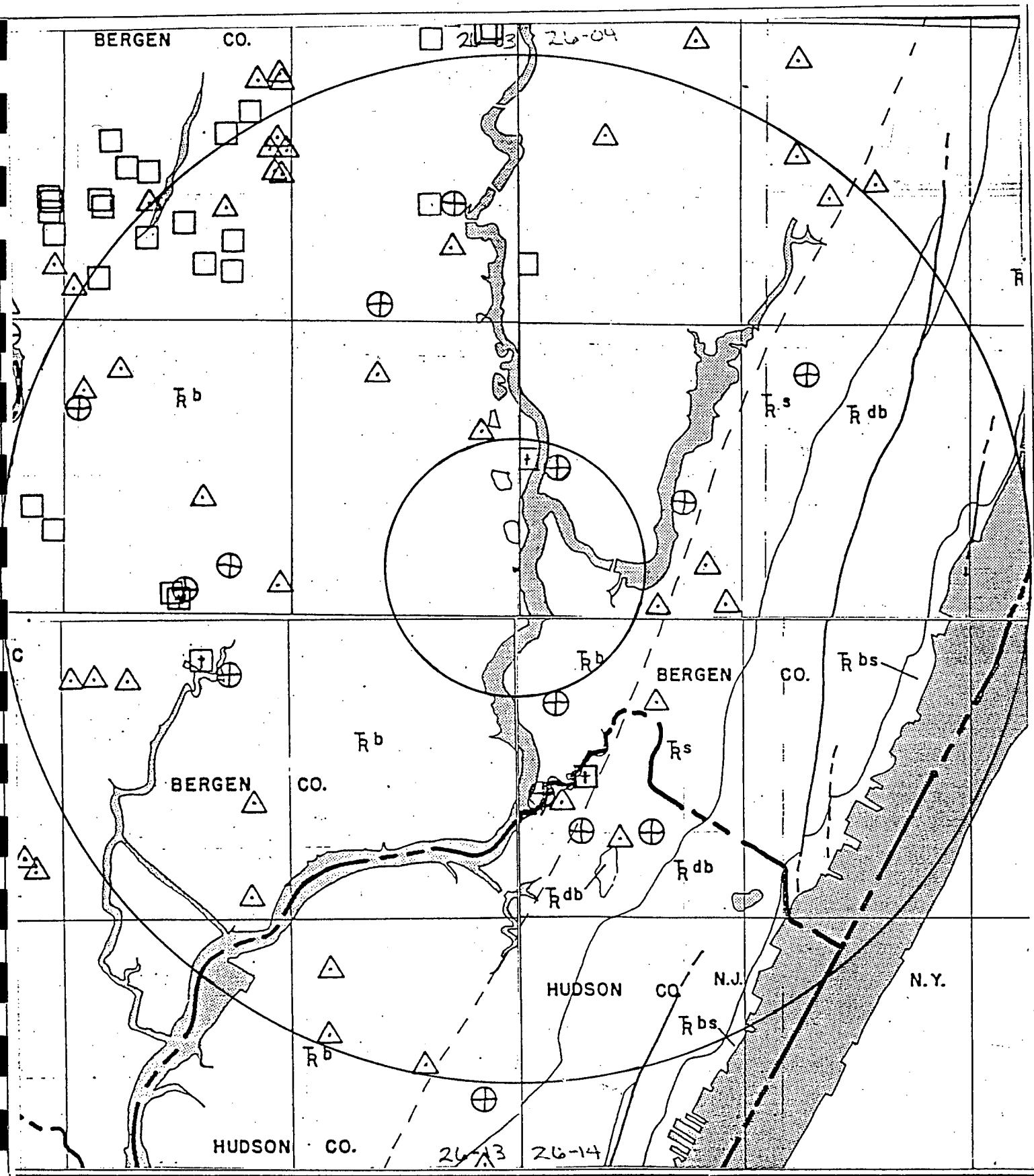
DIETRICHS INDUSTRIAL SITE
DIETRICHS STREET
LITTLE FERRY, BERGEN COUN
TAX MAP
MAP 3



DIETRICHS INDUSTRIAL SITE
DIETRICHS STREET
LITTLE FERRY, BERGEN COUNTY
BERGEN COUNTY ROAD MAP
MAP 4



DIETRICHS INDUSTRIAL SITE
DIETRICHS STREET
LITTLE FERRY, BERGEN COUNTY
NEW JERSEY ATLAS
BASE MAP-SHEET 26
MAP 5



Scale: 1 Mile to an Inch.

Miles 1 0 1 2 3

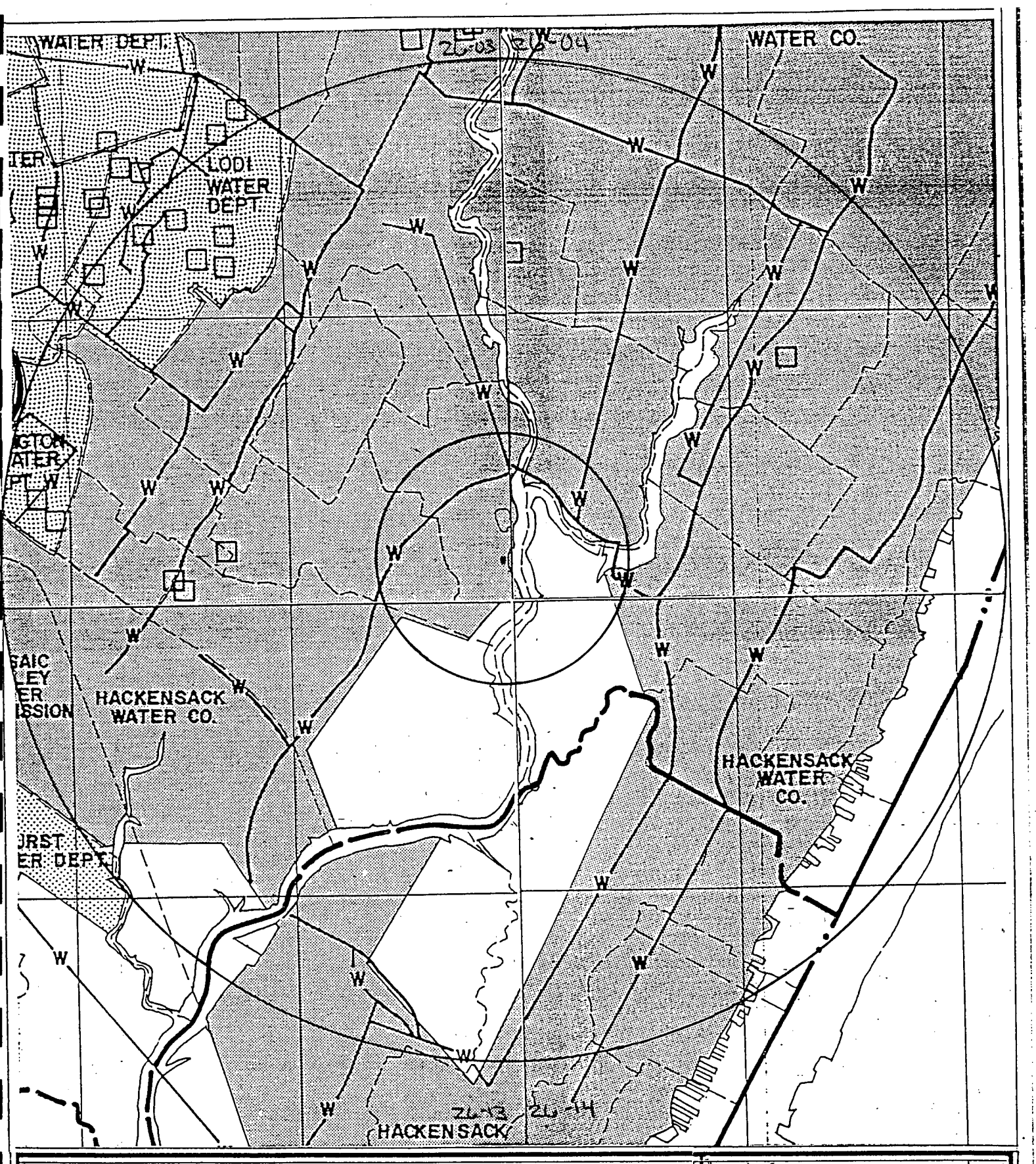
Yards 1000 500 0 1000 2000 3000

Meters 1000 500 0 1000 2000 3000

A. HOEN & CO. BALTIMORE, MD.

Contour Interval: 20 feet

DIETRICHS INDUSTRIAL SITE
DIETRICHS STREET
LITTLE FERRY, BERGEN COUNTY
NEW JERSEY ATLAS
GEOLOGIC OVERLAY-SHEET 26
MAP 6



Scale: 1 Mile to an Inch.

Miles 1 0 1 2 3

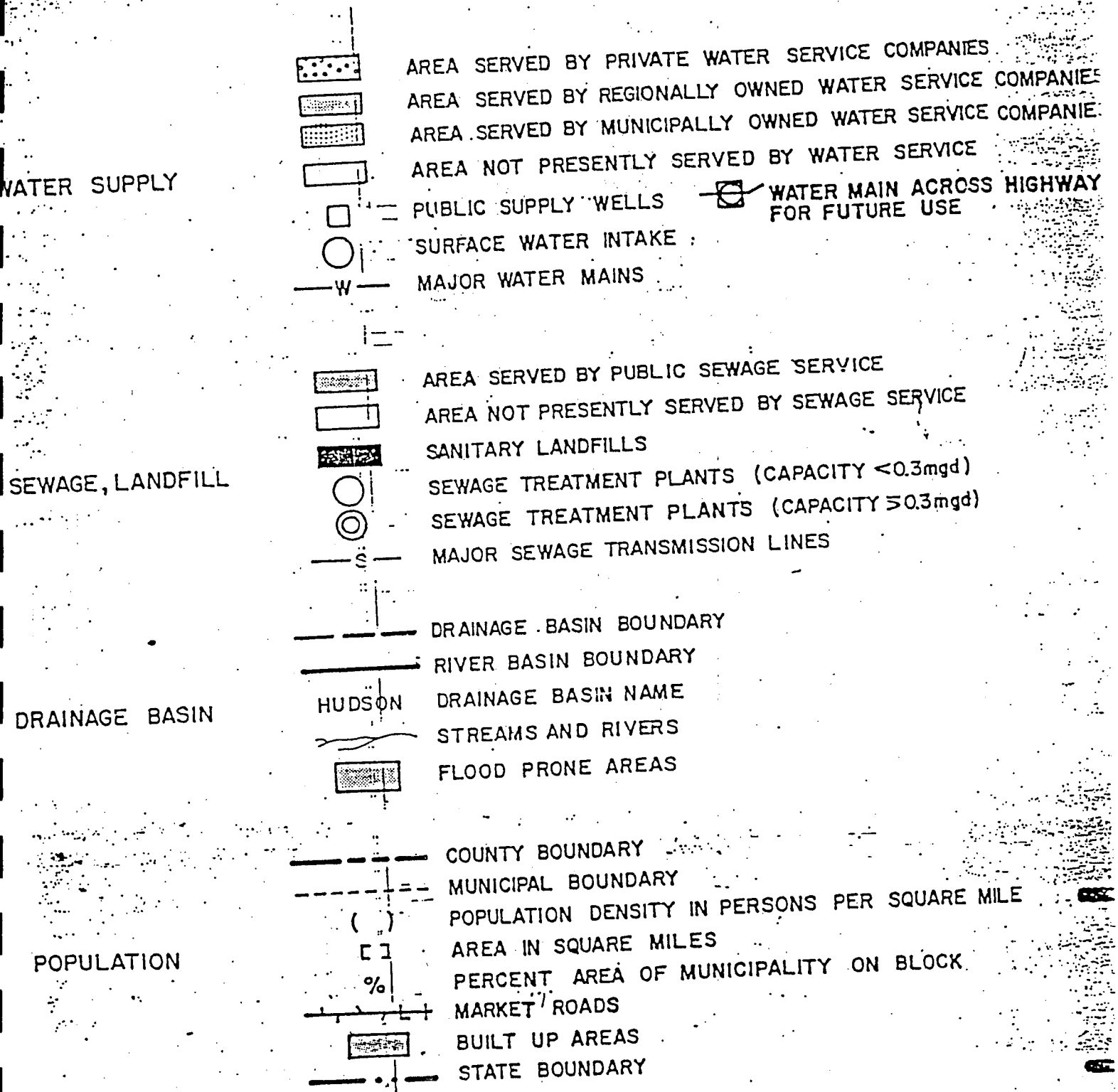
Yards 1000 500 0 1000 2000 3000

Meters 1000 500 0 1000 2000 3000

Contour Interval: 20 feet

DIETRICHS INDUSTRIAL SITE
DIETRICHS STREET
LITTLE FERRY, BERGEN COUNTY
NEW JERSEY ATLAS
WATER SUPPLY OVERLAY-SHEET 26
MAP 7

LEGEND


WATER SUPPLY
AREA SERVED BY PRIVATE WATER SERVICE COMPANIES
AREA SERVED BY REGIONALLY OWNED WATER SERVICE COMPANIES
AREA SERVED BY MUNICIPALLY OWNED WATER SERVICE COMPANIES
AREA NOT PRESENTLY SERVED BY WATER SERVICE
PUBLIC SUPPLY WELLS
WATER MAIN ACROSS HIGHWAY FOR FUTURE USE
SURFACE WATER INTAKE
W
MAJOR WATER MAINS
SEWAGE, LANDFILL
AREA SERVED BY PUBLIC SEWAGE SERVICE
AREA NOT PRESENTLY SERVED BY SEWAGE SERVICE
SANITARY LANDFILLS
SEWAGE TREATMENT PLANTS (CAPACITY <0.3mgd)
SEWAGE TREATMENT PLANTS (CAPACITY ≥0.3mgd)
S
MAJOR SEWAGE TRANSMISSION LINES
DRAINAGE BASIN
DRAINAGE BASIN BOUNDARY
RIVER BASIN BOUNDARY
HUDSON
DRAINAGE BASIN NAME
STREAMS AND RIVERS
FLOOD PRONE AREAS
POPULATION
COUNTY BOUNDARY
MUNICIPAL BOUNDARY
( )
POPULATION DENSITY IN PERSONS PER SQUARE MILE
[ ]
AREA IN SQUARE MILES
%
PERCENT AREA OF MUNICIPALITY ON BLOCK
MARKET ROADS
BUILT UP AREAS
STATE BOUNDARY

LEGEND FOR ATLAS SHEET [illegible]

△ — INDUSTRIAL WELL YIELD OVER 70 GALLONS PER MINUTE (INCLUDING PRIVATE WELLS)

□ — PUBLIC SUPPLY WELL YIELDING OVER 70 GALLONS PER MINUTE

⊕ — UNSUCCESSFUL ROCK WELL YIELDING LESS THAN 70 GALLONS PER MINUTE

⊙ — UNSUCCESSFUL SAND WELL YIELDING LESS THAN 70 GALLONS PER MINUTE

⊡ — NO TEST — NO DATA ON YIELD

——— FAULT (DASHED WHERE INFERRED)

——— CONTACT (DASHED WHERE INFERRED)

PHYSIOGRAPHIC PROVINCE BOUNDARY

WATER SUPPLY TRANSMISSION LINE

NOTE: WHERE THE PRECAMBRIAN FORMATION BOUNDARIES TERMINATE ABRUPTLY, IT IS THE GEOLOGIST'S OPINION THAT THE GEOLOGICAL COMPLEXITY OF THE AREA PREVENTS FURTHER INTERPRETATIONS.

Kmr — CRETACEOUS MAGOTHY AND RARITAN FORMATIONS (SAND AND CLAY)

$\overline{R}$b — TRIASSIC BRUNSWICK FORMATION

$\overline{R}$c — TRIASSIC CONGLOMERATE BEDS OF THE STOCKTON FORMATION

$\overline{R}$l — TRIASSIC LOCKATONG FORMATION

$\overline{R}$db — TRIASSIC DIABASE

$\overline{R}$bs — TRIASSIC BASALT FLOWS

Sd — SILURIAN DECKER LIMESTONE AND LONGWOOD SHALE FORMATIONS

Sgp — SILURIAN GREEN POND CONGLOMERATE

Omb — ORDOVICIAN MARTINSBURG SHALE

$\overline{\epsilon}$Ok — CAMBRO ORDOVICIAN KITTATINNY LIMESTONE

$\overline{\epsilon}$h — CAMBRIAN HARDYSTON SANDSTONE

PRECAMBRIAN:

gh - HORNBLENDE GRANITE WITH PYROXENE GRANITE

ga - ALASKITE

am - AMPHIBOLITE

px - PYROXENE GNEISS

gnq - QUARTZ PLAGIOCLASE GNEISS

gnb - BIOTITE GNEISS

sk - SKARN, GRAPHITE SCHIST

fnd — FORMATION NOT DETERMINED

BLOCK #26-03

8/76

A. Hackensack, Orange, Paterson, Weehawken

B. Hackensack-Hackensack; Passaic-Saddle River, Lower Passaic

C. 2. Map No.	Location	Period of Record
53	Passaic River at Dundee Dam, Clifton	7/23/45
61	Saddle River at Lodi	1923-
62	Weasel Brook at Clifton	1937-1961
419	Fleischer Brook, East Paterson (Market St.)	1967-
423	Sprout Brook at Rochelle Park	1965-
3. 242	Overpeck Creek at Ridgefield	1964-
248	Passaic River at Garfield	1964
264	Saddle River at Garfield	1967-

Water Quality Standards: (explained in Atlas Sheet description)
FW3, TW1 except where classified TW2 or TW3

D. Brunswick Formation

E. 1. Physiographic Province: Piedmont
Subdivision: Triassic Lowlands
Major Topographic Features: Red Sandstone Plain
Elevations (ft.above sea level): ridges 150, valleys 0
Relief (ft.): 150

2. a. Normal Year: 45"
Dry Year: 36"
Wet Year: 50"

b. January: 31°F
July: 74°F

c. 245 days. Last killing frost: 4/20; first killing frost: 10/20

F. Bergen County:
Saddle River County Park

H. Von Steuben House, River Edge

I. Water Well Records

Location	Owner	Year Drilled	Screen Setting or Depth of Casing	Total Depth	g/m Yield	Formation
□ 26-03-111	Boro of Fair Lawn			408	380	Trb
□ 26-03-111	"			458	280	"
□ 26-03-112	"			500	143	"
△26-03-117	Fair Lawn Dairy Co.,Inc.	1955	62	205	125	"
□26-03-124	Fair Lawn Water Dept.	1954	47	200	173	"
□26-03-127	Fair Lawn Dept.of Pub.Wks.	1955	48/53	400	165	"
□26-03-127	Boro of Fair Lawn			338	245	"
△26-03-137	Metro Glass			200	120	"
△26-03-146	Ellwood Stores Inc.	1952	22	692	100	"
□ 26-03-161	Boro of Wallington			300	304	"
□26-03-171	Garfield Boro Water Dept.			330	95	"
○26-03-174	Marcal Paper Mills, Inc.	1962	25	35	35	Q
□ 26-03-177	"	1962	23	27	No test	"
□ 26-02-177	"	1962	8	20	"	"
□26-03-177	"	1962	22	30	"	"
△26-03-178	Sausville, J. & Son			300	100	Trb
△26-03-188	Rel Plastic Corp.	1952	79	150	75	"
○26-03-211	Boro of Fair Lawn			500	65	"
△26-03-217	Farmland Dairies, Inc.	1974	47	635	235	"
△26-03-231	All Purpose Roll Leaf	1962	71	350	100	"
□26-03-256	Hackensack Water Co.	1965	77'10"	473	250	"
△26-03-259	Bijur Lubricating Corp.			175	200	"
△26-03-262	Alexander's Dept. Store	1961	25	35	290	Q
□ 26-03-355	Hackensack Water Co.	1959		75	No test	Trb
□26-03-382	Lodi Dept.of Public Works			450	175	"
△ 26-03-394	Spartan Typographers Inc.	1956	135	145	75	Q
△26-03-394	Hackensack Cable Co.	1958	106	120	171	Trb
□ 26-03-426	East Paterson, Boro of	1954	80	200	180	"
□26-03-427	Boro of Wallington			400	350	"
□ 26-03-453	City of Garfield	1966	57/77	475	77	"
□26-03-456	"	1967	33/56	400	328	"
○26-03-456	"	1966	20/43	710	30	"
△26-03-457	Whippany Paper Board	1956	54	250	312	"
□ 26-03-469	City of Garfield			273	95	"
□ 26-03-469	"			320	130	"
□26-03-469	"			165	400	"
○26-03-483	"	1966	21/40	400	25	"
○26-03-485	Botany Worsted Mills			81	7	"
□26-03-489	City of Garfield	1967	61.5	276	No test	"
□26-03-493	"			326	89	"
△26-03-496	Laurel Co.			500	100	"
△26-03-497	Heyden Chemical Works			375	90	"
△26-03-535	Aquarium, Inc.	1963	22	300	172	"
△26-03-536	Maywood Chemical Co.			220	400	"
△26-03-536	Citro Chemical Co.			220	400	"
□26-03-538	Lodi, Boro of			403	600	"
□26-03-542	City of Garfield	1968	15/35	405	405	"
□26-03-546	Lodi, Boro of			300	170	"
□26-03-548	"			?	135	"
□ 26-03-548	"			200	125	"
□26-03-554	Lodi Dept.of Public Works	1965	20/40	510	100	"

△26-03-557	Washine Chemical Co.	1966	29'4"/ 46'10-1/2"	400	100	Trb
□26-03-561	Boro of Lodi			?	295	"
△26-03-563	Lodi Shopping Center	1960	22	300	290	"
△26-03-563	"	1956	20'8"	301	350	"
△26-03-563	Muscarelle, J.L., Inc.	1966	32	400	159	"
△26-03-566	Interchemical Corp.			435	187	"
△26-03-566	Spiegal Mfg. Corp.	1969	34/43	300	237	"
△26-03-567	Master Etching Corp.	1965	29	400	105	"
□26-03-575	Boro of Lodi	1954	31'5"/ 53'1"	459	157	"
△26-03-577	Yoo-Hoo Beverage Co.	1959	22	303	95	"
□26-03-581	Boro of Lodi			?	145	"
□26-03-582	Lodi Dept.of Public Works	1965	36/56	450	175	"
□26-03-586	Boro of Lodi			?	109	"
□26-03-591	"	1966	28/48	470	285	"
□26-03-594	"			350	85	"
□26-03-623	Hackensack Water Co.			189	215	Q
□26-03-632	"	1954	130/ 148'8"	168	1700	"
□26-03-632	"	1955	168	190	1420	"
□26-03-659	Bowler City	1958	120	400	108	Trb
○26-03-667	Food Fair Stores	1954	270	525	55	"
○26-03-687	Spinnerin Yarn	1965	110	400	55	"
△26-03-691	Seilheimer Beverage Co.	1958	115	415	76	"
△26-03-715	Farmland Dairy Inc.	1968	12/50	400	25	"
○26-03-728	Paterson Parchment Paper Co.			378	53	"
○26-03-731	Prescott, J.L. & Co.	1962	90	500	25	"
△26-03-731	Tendebrands Frozen Foods	1950	76	230	100	"
○26-03-756	Boro of Wallington	1964	118.5	300	30	"
□26-03-768	"	1965	40	400	217	"
□26-03-793	"			300	330	"
△26-03-816	Wright Aeronautical Eqpt.	1957		340	515	"
△26-03-817	Tube Reducing Corp.	1954	20	397	90	"
○26-03-817	"	1954	31	392	20	"
△26-03-859	Terminal Construction Co.	1952	20	145	120	"
□26-03-888	Hackensack Water Co.	1955	86	86	300	Q
□26-03-888	"	1955		263	No test	Q
○26-03-888	Lancaster Chemical Co.	1963	311/287	400	55	Trb
○26-03-894	Hackensack Water Co.	1955		243	60	Q
△26-03-899	World Plastic Extruders,Inc.	1966	53	200	100	Trb
△26-03-924	DeTroy Press, Inc.	1956	67	150	95	"
△26-03-962	Stage Coach Inn			565	110	"

J. Geodetic Control Survey monuments described
Index Maps 15,21; adjacent Index Map 16

BLOCK #26-04,05

A. Central Park, Hackensack, Weehawken, Yonkers

B. Hackensack-Hackensack, Hudson-Hudson

C. 2.

Map No.	Location	Period of Record
414	Metzler Brook at Englewood	1965-
3. 239	Hackensack River at Hackensack	1964-
240	Hackensack River at Little Ferry	1964-
241	Overpeck Creek at Ridgefield	1964-
242	Berrys Creek at Moonachie	1964-

Water Quality Standards: (explained in Atlas Sheet description)
FW2, TW1 except where classified FW3 or TW2

D. Brunswick Formation (Trb), Stockton Formation (Trs), Diabase (Trdb).

E. 1. Physiographic Province: Piedmont
Subdivision: Triassic Lowlands
Major Topographic Features: Red Sandstone Plain, Palisades Ridge
Elevations (ft.above sea level): ridges 450,valleys 0
Relief (ft.): 450

2. a. Normal Year: 44"
Dry Year: 36"
Wet Year: 51"

b. January: 32°F
July: 74°F

c. 246 days. Last killing frost: 4/20; first killing frost: 10/20

F. Bergen County:
Overpeck County Park and Golf Course

G. Palisades Interstate Park Commission - Palisades Interstate Park

H. Palisades Interstate Park

I. Water Well Records

Location	Owner	Year Drilled	Screen Setting or Depth of Casing	Total Depth	g/m Yield	Formation
△26-04-144	Silver Park Record Co.	1958	44	335	185	Trb
△26-04-174	Federated Dept.Stores Inc.	1959	117'11"	147	254	Q
△26-04-196	Englewood Hospital Assn.	1968	53'3"	230	222	Trb
△26-04-212	Food Fair Stores	1958	25	300	172	"
△26-04-227	Patterspn, H & Sons	1966	20	198	225	"
△26-04-233	Grand Union Co.			50	82	Trs
△26-04-296	Englewood Hospital Assn.			218	89	"
△26-04-317	Clinton Inn	1963	39	107	402	"
△26-04-432	Grand Union Co.	1953	35	150	75	Trb
△26-04-451	Home Town Laundries, Inc.			240	150	"
□26-04-474	Bogota Water Co.			275	160	"
△26-04-516	Tenafly Enterprises	1970	33	168	70	?
△26-04-543	Spiegel Mfg.Corp.	1963	135	145	150	Q
△26-04-556	Scharf, Charles	1955	64	250	100	Trs
△26-04-557	Cart-Wright, Inc.	1960	115	298	100	"
⊞26-04-744	Flinkote Co.	1955	38	38	No test	Q
○26-04-745	Hygenic Ice Co.			750	7	Trb
○26-04-767	Schonbrunn Co., Inc.	1965	40	291	60	Trs
△26-04-795	J.G.Knits, Inc.	1972	50	300	250	Trb
△26-04-789	Grove Pine Corp.	1966	88-	315	200+	Trs
△26-04-799	Great Bear Spring Co.	1965	30	95	178	Trb
○26-04-816	Leonia Board of Education	1968	58	350	52	Trs

J. Geodetic Control Survey monuments described
Index Maps 15,16,21

BLOCK #26-13

A. Jersey City, Orange, Weehawken

B. Hudson-Hudson; Hackensack-Hackensack; Passaic-Lower Passaic

C. 3.

Map No.	Location	Period of Record
242	Berry's Creek at Moonachie, Moonachie Ave.	1964-
263	Hackensack River at Harrison, Belleville Tpk.	1967-

Water Quality Standards: (explained in Atlas Sheet description)
TW2 except where classified TW3

D. Brunswick Formation (Trb), Stockton Formation (Trs), Diabase (Trdb), Manhattan Schist (Oms)

E. 1. Physiographic Province: Piedmont
Subdivision: Triassic Lowlands
Major Topographic Features: Red Sandstone Plain, Palisades Ridge, Hackensack Meadows
Elevations (ft. above sea level): ridges 250, valleys 0
Relief (ft.): 250

2. a. Normal Year: 43"
Dry Year: 36"
Wet Year: 53"

b. January: 32°F
July: 74°F

c. 245 days. Last killing frost: 4/10; first killing frost: 10/20

F. Bergen County:
Riverside County Park and Hackensack River Area

I. Water Well Records

Location	Owner	Year Drilled	Screen Setting or Depth of Casing	Total Depth	g/m Yield	Formation
△26-13-157	Pennick, S.B. Co.	1966	42	352	180/200	Trb
				702	200	"
△26-13-177	Breyer Ice Cream Co.	1968	39	300	157	"
△26-13-195	Omni Chemical Corp.	1966	25	302	220	"
△26-13-195	Sika Chemical Corp.	1956	191	201	105	Q
△26-13-214	Trubeck Laboratories	1966	118	363	251	Trb
△26-13-215	Beckton & Dickinson	1965	45	285	135	"
△26-13-216	Marijon Piece Dye Co.	1954	92'11"	103	No test	Q
□ 26-13-226	Hackensack Water Co.	1965	70	220	60	Trb
○ 26-13-234	U.S. Printing Ink Co.	1965	21	300	190	"
△ 26-13-268	Top Notch Plating Co.			400	115	"
△ 26-13-298	Alpha Refining Co.	1957	39	180	90	"
△ 26-13-415	Minit-Man Auto Car Wash	1956	30	320	82	"
△ 26-13-447	Food Fair Stores, Inc.	1963	66.5	740	145	"
△ 26-13-499	Pfaff Tool & Mfg. Co.					

△26-13-598	Erie Railroad			184	200	Trs
○26-13-598	"			182	4	Trb
△26-13-615	Keystone Metal Finishers	1968	20	200	312	"
△26-13-642	"	1950	18	200	76	"
△26-13-655/6	"	1960	21	150	150	Trs
○26-13-668	Kiesewetter			380	0	Trdb-Trs
△26-13-695	North Bergen Realty Co.			72	90	Q
△26-13-775	Fairmount Chemical Co.	1965	114	300	300	Trb
△26-13-775	United Shellac Co.			475	200	"
△26-13-921	Miller & Co.			135	925	Q
○26-13-924	DeAngelis Packing Co.	1948		45	0	"
△26-13-983	Mehl, John & Co.	1913		1020	150	Trdb
○26-13-983	"	1923		1050	40	"
○26-13-984	Mountain Ice Co.			950	0	Trdb-PG
△26-13-987	Steel Laundry Co.			1028	130	" "
○26-13-994	General Refrigerator			1350	0	Trs-PG
△26-13-995	Columbia Amusement Park			200	100	Trs

J. Geodetic Control Survey monuments described
Index Maps 21,26; adjacent Index Map 16

BLOCK #26-14, 15

A. Central Park, Jersey City, Weehawken

B. Hackensack-Hackensack, Hudson-Hudson

C. 2. Map No. 415 Location Wolf Creek at Ridgefield Period of Record 1965-

Water Quality Standards: (explained in Atlas Sheet description) TW2

D. Brunswick Formation (Trb), Stockton Formation (Trs), Diabase (Trdb), Manhattan Schist (Oms), Serpentine (sp)

E. 1. Physiographic Province: Piedmont
Subdivision: Triassic Lowlands
Major Topographic Features: Red Sandstone Plain, Palisades Ridge, Hackensack Meadows
Elevations (ft.above sea level): ridges 250, valleys 0
Relief (ft.): 250

2. a. Normal Year: 47"
Dry Year: 39"
Wet Year: 55"

b. January: 32°F
July: 74°F

c. 242 days. Last killing frost: 4/20; first killing frost: 10/20

I. Water Well Records

Location	Owner	Year Drilled	Screen Setting or Depth of Casing	Total Depth	g/m Yield	Formation
○26-14-118	Colorite Color Plastics	1968	52/62	425	20	Trb
△26-14-129	Merrill Corp.			300	90	Trs
⊟26-14-146	Gibraltar Corrugated Paper Co.	1952	136	170	No test	Trb
○26-14-147	Armour Soap Works			116	0	Q
△26-14-148	"			108	265	"
○26-14-173	"			330	14	Trs
△26-14-182	Gibraltar Corrugated Paper Co.	1954	105	122	300	Q
○26-14-183	Consolidated Bleaching	1950	93	528	44	Trdb
△26-14-742	Sweets Co. of America	1955	47'1"	400	105	Trs
△26-14-744	Chocolat Menier			500	125	"
△26-14-771	Progressive Silk Finishing Co.			500	125	"

J. Geodetic Control Survey monuments described
Index Maps 21,16,26

SUBJECT TO REVISION

WATER WITHDRAWAL POINTS AND NJGS CASE INDEX SITES WITHIN 5.0 MILES OF:

LATITUDE 405027
LONGITUDE 740207

DRAFT

SCALE: 1:63,360
(1 inch = 1 Mile)

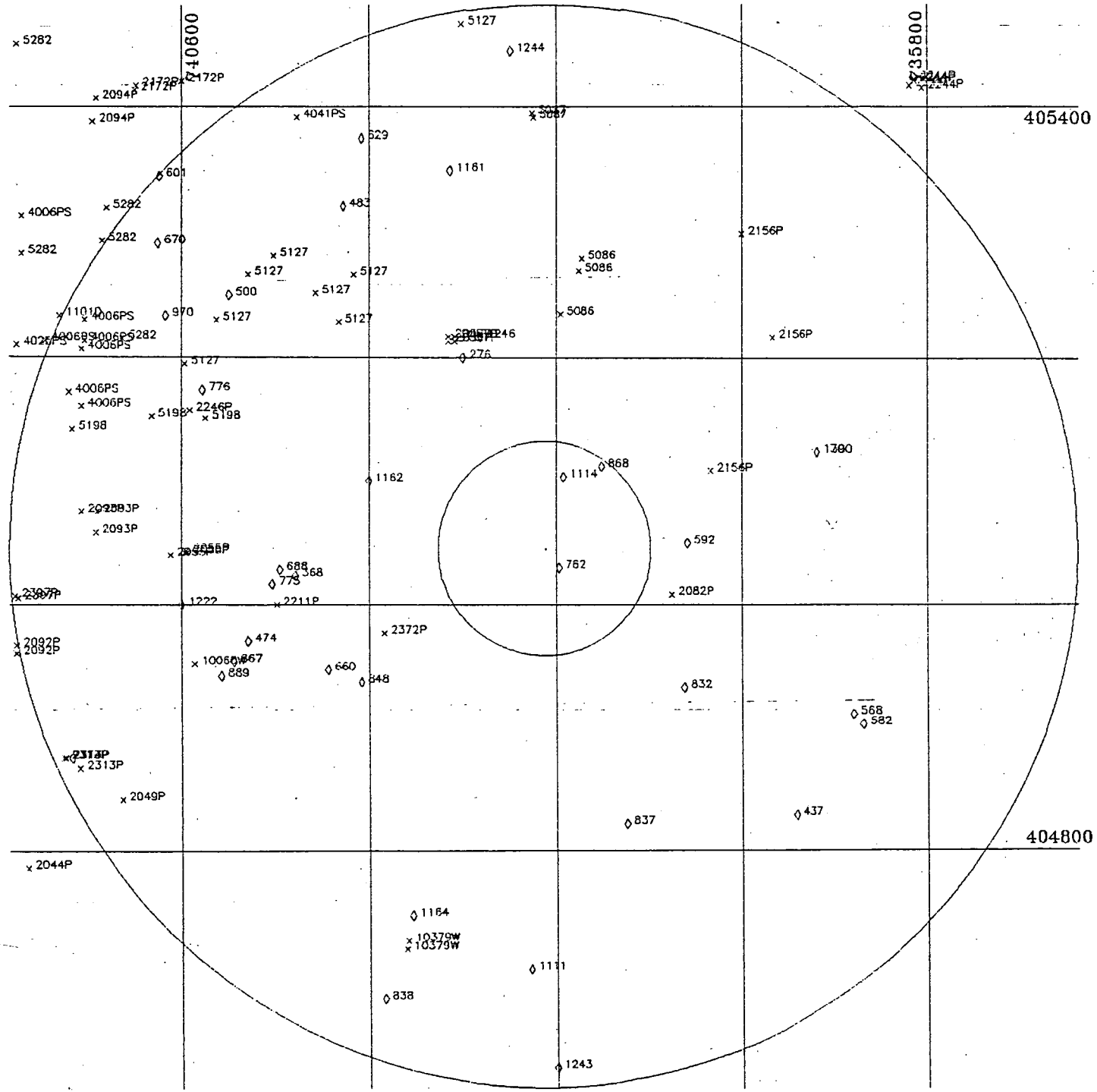
1 mile

× WATER WITHDRAWAL POINTS
◊ NJGS CASE INDEX SITES
1 MILE AND 5 MILE RADII INDICATED

NJGS CASE INDEX DATA RETRIEVED FROM:
NEW JERSEY GEOLOGICAL SURVEY
ON 12/22/87

PLOT PRODUCED BY:
NJDEP
DIVISION OF WATER RESOURCES
BUREAU OF WATER ALLOCATION
CN-029
TRENTON, NJ 08625

DATE: 03/27/91



SUBJECT TO REVISION

 PRELIMINARY SURVEY OF WATER WITHDRAWAL POINTS WITHIN 5.0 MILES OF 405027 LAT. 740207 LON. (IN ORDER BY PERMIT NUMBER) - 03/27/91

NUMBER	NAME	SOURCEID	LOCID	LAT	LON	LLACC	DISTANCE	COUNTY	MUN	DEPTH	GEO1	GEO2	CAPACITY
10060W	CARLSTADT - E. RUTHERFORD BOE	2603920	1	404931	740552	F	3.5	03	12	225	GTRB		125
10379W	KEYSTONE METAL FINISHERS, INC.	2602297	2	404717	740333	T	3.9	17	09	150	GTRB		130
	KEYSTONE METAL FINISHERS, INC.	2604201	3	404713	740336	T	3.9	17	09	312	GTRB		300
1101D	FOSTER WHEELER PASSAIC, INC.			405220	740718		5.0	31	07	46	GD		175
2044P	GRAND UNION CO.	4600002		404752	740738	S	5.7	03	39	300	GTRB		80
2049P	SIKA CORPORATION	2604036	1	404825	740638		4.6	03	32	302	GTRB		220
2055P	GANES CHEMICAL, INC.	4600080	2	405026	740557	F	3.4	03	05	490	GTRB		200
	GANES CHEMICAL, INC.	2600005	4	405024	740607	F	3.5	03	05	526	GTRB		80
	GANES CHEMICAL, INC.	2604277	5	405025	740557	F	3.4	03	05	430	GTRB		30
2057P	SPINNERIN YARN CO., INC.	4600177	0	405208	740309	F	2.1	03	59	404	GTRB		65
	SPINNERIN YARN CO., INC.	4600083	2	405210	740305	F	2.1	03	59	435	GTRB		0
	SPINNERIN YARN CO., INC.	2603018	3	405210	740309	F	2.2	03	59	400	GTRB		50
	SPINNERIN YARN CO., INC.	4600176	4	405208	740305	F	2.1	03	59	400	GTRB		140
	SPINNERIN YARN CO., INC.	2611599	5 PROPOSED	405210	740305	F	2.1	03	59		GTRB		
2082P	LOWE PAPER COMPANY	4600095	2	405005	740045	F	1.3	03	49	484	GTRBS		50
	LOWE PAPER COMPANY	4600096	3	405005	740045	F	1.3	03	49	492	GTRBS		75
	LOWE PAPER COMPANY	4600097	4	405005	740045	F	1.3	03	49	597	GTRBS		100
	LOWE PAPER COMPANY	4600098	5	405005	740045	F	1.3	03	49	500	GTRBS		80
	LOWE PAPER COMPANY	4600099	6	405005	740045	F	1.3	03	49	600	GTRBS		50
2092P	GIVAUDAN CORPORATION	4600006	6	404936	740745	F	5.6	31	02	297	GTRB		225
	GIVAUDAN CORPORATION	4600007	7	404940	740745	F	5.0	31	02	250	GTRB		110
2093P	ORVAL KENT FOOD COMPANY, INC.	2604317	1	405045	740704	F	4.3	03	12	580	GTRB		150
	ORVAL KENT FOOD COMPANY, INC.	2604341	2	405045	740654	S	4.2	03	12	300	GTRB		150
	ORVAL KENT FOOD COMPANY, INC.	2604382	3	405035	740655	T	4.2	03	12	470	GTRB		430
2094P	D.A.K. MANUFACTURING CORP.	2600466	1	405404	740655	F	5.9	03	11		GTRB		
	D.A.K. MANUFACTURING CORP.	4600210	2	405404	740655	U	5.9	03	11		GTRB		
	D.A.K. MANUFACTURING CORP.	4600211	3	405404	740655	U	5.9	03	11		GTRB		
	D.A.K. MANUFACTURING CORP.	2605037	4	405353	740657	F	5.8	03	11	250	GTRB		60
2156P	BERGEN COUNTY PARK COMMISSION	POND	1	405300	740000	S	3.5	03	60	13	GOSD		750
	BERGEN COUNTY PARK COMMISSION	2604359	WELL 1	405210	735940	F	2.9	03	29	430	GTRB		250
	BERGEN COUNTY PARK COMMISSION	2604300	WELL 2	405105	740020	F	1.7	03	45	485	GTRB		125
2172P	PARK 80 ASSOCIATES	2604234	1	405408	740630	S	5.7	03	57	400	GTRB		300
	PARK 80 ASSOCIATES	2604235	2	405410	740629	S	5.7	03	57	400	GTRB		300
	PARK 80 ASSOCIATES	2605301	3	405410	740629	S	5.7	03	57	300	GTRB		0
	PARK 80 ASSOCIATES	2604104	4	405412	740600	S	5.5	03	57	300	GTRB		
2211P	HENKEL PROCESS CHEMICALS, INC.	4600125	1	405000	740500		2.6	03	05	170	GOSD		600
2244P	ENGLEWOOD HOSPITAL ASSOCIATION	4600159	3	405409	735804	F	5.5	03	15	324	GTRB		50
	ENGLEWOOD HOSPITAL ASSOCIATION	2602436	4	405410	735812	F	5.5	03	15	300	GTRB		100
	ENGLEWOOD HOSPITAL ASSOCIATION	2604217	5	405412	735809	S	5.5	03	15	230	GTRB		200
	ENGLEWOOD HOSPITAL ASSOCIATION	2604469	6	405413	735809	F	5.5	03	15	300	GTRB		200
2246P	FARMLAND DAIRIES INC.	2604169	1	405134	740555	U	3.6	03	65	600	GTRB		200
	FARMLAND DAIRIES INC.	2304250	2	405134	740555	U	3.6	03	65	500	GTRB		185
2313P	PENCO OF LYNDHURST INC.	4600172	1	404845	740714		4.9	03	32	267	GTRB		110
	PENCO OF LYNDHURST INC.	4600173	2	404845	740715		4.9	03	32	313	GTRB		185
	PENCO OF LYNDHURST INC.	2601699	3	404845	740715	F	4.9	03	32	410	GTRB		150
	PENCO OF LYNDHURST INC.	2603904	4	404840	740705	F	4.8	03	32	352	GTRB		185
2372P	YOO-HOO CHOCOLATE BEV. CORP.	2602067	1	404946	740350		1.7	03	05	303	GTRB		90
	YOO-HOO CHOCOLATE BEV. CORP.	2602933	2	404946	740350		1.7	03	05	393	GTRB		50
	YOO-HOO CHOCOLATE BEV. CORP.	2603053	3	404946	740350		1.7	03	05	378	GTRB		55
2377P	SANDY ALEXANDER INC			405003	740744	S	4.9	31	02		GTRB		
	SANDY ALEXANDER INC			405004	740746	S	5.0	31	02		GTRB		
4006PS	DUNDEE WATER POWER & LAND CO.	DUNDEE LK/G.S.	G.S. PAPER	405308	740742	T	5.8	03	21		SPPAS		
	DUNDEE WATER POWER & LAND CO.	DUNDEE CAN	WHIPPANY	405208	740727	T	5.1	31	02		SP		
	DUNDEE WATER POWER & LAND CO.	DUNDEE CAN	CHELTON CO	405208	740702	T	4.7	31	02		SP		
	DUNDEE WATER POWER & LAND CO.	DUNDEE CAN	OKONITE CO	405143	740712	T	4.7	31	07		SP		

NUMBER	NAME	SOURCEID	LOCID	LAT	LON	LLACC	DISTANCE	COUNTY	MUN	DEPTH	GEO1	GEO2	CAPACITY
	DUNDEE WATER POWER & LAND CO.	DUNDEE CAN	PASSAIC IN	405218	740702	T	4.8	31	02		SP		
	DUNDEE WATER POWER & LAND CO.	DUNDEE CAN	TUCK IND.	405136	740704	T	4.5	31	07		SP		
	DUNDEE WATER POWER & LAND CO.	DUNDEE CAN	PANTASOTE	405204	740704	T	4.7	31	02		SP		
4025PS	KALAMA CHEMICAL, INC.	PASSAIC RIVER		405206	740745	T	5.3	03	21		SPPAS		
4041PS	STEFAN CHEMICAL COMPANY	SADDLE RIVER		405355	740447		4.6	03	54		SPSAD		2000
5086	HACKENSACK WATER COMPANY	4600065	2	405221	740157		2.2	03	04	550	GTRB		180
	HACKENSACK WATER COMPANY	4600066	3	405248	740143		2.7	03	04	350	GTRB		175
	HACKENSACK WATER COMPANY	4600067	4	405242	740145		2.6	03	04	225	GTRB		
5087	HACKENSACK WATER COMPANY	2600914	1	405357	740216		4.0	03	23	168	GOSD		1550
	HACKENSACK WATER COMPANY	2601034	2	405355	740215		4.0	03	23	190	GOSD		1400
5127	LODI BOROUGH	4600068	ARNOT ST.	405240	740518		3.8	03	31	300	GTRB		160
	LODI BOROUGH	4600069	4	405249	740502		3.7	03	31	307	GTRB		295
	LODI BOROUGH	4600070	5	405249	740502		3.7	03	31	300	GTRB		355
	LODI BOROUGH	4600071	7	405249	740502		3.7	03	31	332	GTRB		355
	LODI BOROUGH	4600072	LAWRENCE	405217	740420	U	2.9	03	31	373	GTRB		500
	LODI BOROUGH	4600073	COLUMBIA	405240	740410	U	3.1	03	31	409	GTRB		375
	LODI BOROUGH	2601037	TERRACE	405157	740558		3.8	03	31	607	GTRB		190
	LODI BOROUGH	2601010	GARFIELD	405218	740538		3.7	03	31	459	GTRB		150
	LODI BOROUGH	2603185	HOME PLACE	405439	740301		4.9	03	31	450	GTRB		175
	LODI BOROUGH	2603183	CORABELLE	405231	740435		3.2	03	31	470	GTRB		200
	LODI BOROUGH	2602933	DUL	405131	740619		3.9	03	65	400	GTRB		140
5198	WALLINGTON BOROUGH	2603934	MAIN AVE	405130	740545	T	3.4	03	65	400	GTRB		150
	WALLINGTON BOROUGH	2603027	LESTER ST	405125	740710		4.6	03	65	400	GTRB		130
5282	GARFIELD WATER DEPARTMENT	4600113	1	405430	740745	T	6.8	03	11	404	GTRB		100
	GARFIELD WATER DEPARTMENT	4600114	2	405430	740745	T	6.8	03	11	358	GTRB		125
	GARFIELD WATER DEPARTMENT	4600118	10	405430	740745	T	6.8	03	11	350	GTRB		150
	GARFIELD WATER DEPARTMENT	4600119	11	405430	740745	T	6.8	03	11	353	GTRB		190
	GARFIELD WATER DEPARTMENT	4600120	12	405430	740745	T	6.8	03	11	350	GTRB		140
	GARFIELD WATER DEPARTMENT	4600121	14	405430	740745	T	6.8	03	11	455	GTRB		140
	GARFIELD WATER DEPARTMENT	4600122	16	405430	740745	T	6.8	03	11	400	GTRB		60
	GARFIELD WATER DEPARTMENT	4600123	17	405430	740745	T	6.8	03	11	353	GTRB		110
	GARFIELD WATER DEPARTMENT	4600124	1	405430	740745	T	6.8	03	11	300	GTRB		150
	GARFIELD WATER DEPARTMENT	2604016	1A	405256	740651		5.0	03	21	400	GTRB		300
	GARFIELD WATER DEPARTMENT	2604063	2	405312	740648	U	5.2	03	21	475	GTRB		150
	GARFIELD WATER DEPARTMENT	2604010	5	405209	740638		4.4	03	21	276	GTRB		150
	GARFIELD WATER DEPARTMENT	2604064	8C	405250	740742		5.6	03	21	405	GTRB		400
	GARFIELD WATER DEPARTMENT	4600115	4	405430	740745	T	6.8	03	11	353	GTRB		90
	GARFIELD WATER DEPARTMENT	4600116	5	405430	740745	T	6.8	03	11	353	GTRB		275
	GARFIELD WATER DEPARTMENT	4600117	8	405430	740745	T	6.8	03	11	354	GTRB		165

Number of Observations: 94

Page 1 of NJGS CASE INDEX SITES WITHIN 5.0 MILES OF 405027 LAT. 740207 LON. AS OF 12/22/87 (IN ORDER BY DECREASING LONGITUDE) - 03/27/91

SITENUM	NAME	LAT	LON	DISTANCE	CONTAM	FMCODE1	FMCODE2	STATUS1	STATUS2
174	PENICK CORP., LYNDHURST, BERGEN CO.	404845	740710	4.8	12	0110	3070	2	J
670	SKETCHLEY SERVICES, BERGEN CO.	405255	740615	4.6	00	0110	3070	1	G
601	CURCIO SCRAP METALS, GARFIELD, BERGEN CO.	405327	740614	5.0	50	130	3070	1	
970	E.C. ELECTROPLATING, GARFIELD, BERGEN CO.	405220	740610	4.2	0	0	0	3	
1222	WALLINGTON WATER DEPT., WALLINGTON, BERGEN CO.	405000	740600	3.4	00	0120	3070	1	C
776	CURTISS-WRIGHT CORP	405144	740547	3.5	00	3070	0	1	A
889	J.B.M.T. PRINTING, E. RUTHERFORD, BERGEN CO.	404925	740535	3.3	00	0101	0100	1	B
500	LODI MUNICIPAL WELL V.O. CONTAM, LODI, BERGEN CO.(SEE ALSO 629)	405230	740530	3.8	0	120	3070	1	E
867	GENERALFOAM CORP, E. RUTHERFORD, BERGEN CO.	404932	740527	3.1	63	0103	0101	1	
474	U O P JOHNSON, EAST RUTHERFORD, BERGEN CO.	404942	740518	2.9	00	103	101	1	E
775	COSAN CHEMICAL CORP, CARLSTADT, BERGEN CO.	405010	740503	2.6	00	0120	3070	1	A
688	DIAMOND SHAMROCK, CARLSTADT, BERGEN CO.	405017	740458	2.5	50	103	101	1	
368	BERRY'S CREEK PROJECT, WOODRIDGE, BERGEN CO.	405014	740448	2.4	38	100	0	1	D
660	SCIENTIFIC CHEMICAL PROCESSING, CARLSTADT, BERGEN CO.	404928	740427	2.3	00	0110	3070	1	C
483	INMONT CHEMICAL, LODI, BERGEN CO.	405313	740417	3.7	00	100	3070	1	B
629	LODI/MAYWOOD RADIOLOGICAL CONTAM., BERGEN CO.(SEE ALSO 500)	405345	740405	4.2	67	120	3070	1	E
848	VORAC CO—DIV OF SEAGRAVE COATING, CARLSTADT, BERGEN CO.	404922	740405	2.1	00	0103	0101	1	B
1162	UNITED WIRE HANGER CORP. HASBROUCK HEIGHTS, BERGEN CO.	405100	740400	1.8	52			3	
838	SQUARE D CO, SECAUCUS, BERGEN CO.	404849	740350	4.4	00	0110	3070	1	B
1164	PLAZA AMOCO/KECKEY'S EXXON, SECAUAUS, HUDSON CO.	404729	740332	3.6				3	
1161	GTE-SYLVANIA, TETERBORO, BERGEN CO.	405330	740308	3.6	53			3	
276	GREAT BEAR SPRING CO., BERGEN CO.	405200	740300	1.9	53	0103	3070	2	
1246	STONE NYCAL, S. HACKENSACK, BERGEN CO.	405210	740249	2.1	63	0100	3070	1	C
1244	ROY'S AMOCO, HACKENSACK, BERGEN CO.	405426	740230	4.6	51	0110	3070	1	C
1111	FERGUSON IRON WORKS, N. BERGEN, HUDSON CO.	404703	740217	3.9	63	0101	0100	1	B
1243	EL GIGANTE AMOCO, UNION CITY, HUDSON CO.	404615	740200	4.8	51	3050	3070	1	C
762	ANDRILL OIL CORP—LITTLE FERRY TER	405018	740158	0.2	00	0103	0101	1	B
1114	RIDGEFIELD PARK EXXON, RIDGEFIELD PARK, BERGEN CO.	405102	740155	0.7	63	0103	0100	1	G
868	TEXACO AT MAIN & PARK ST., RIDGEFIELD PARK, BERGEN CO.	405107	740130	0.9	51	3070	0	1	B
837	SPONGE CLEAN PRODUCTS CO, INC, N. BERGEN, HUDSON CO.	404813	740114	2.7	00	0101	3070	1	B
832	SAM GABBAY, INC., FAIRVIEW, BERGEN CO.	404919	740037	1.8	00	0102	0	4	B
592	PFISTER CHEMICAL, RIDGEFIELD, BERGEN CO.	405030	740035	1.3	1	110	3070	1	E
437	SPENCER KELLOGG, EDGEWATER, BERGEN CO.	404817	735924	3.4	63	100	0	0	
179	LEONIA SPILL, LEONIA, BERGEN CO.	405114	735910	2.7	52	0100	3050	1	B
1300	WESTGATE CONDOMINIUM CORP., FORT LEE, BERGEN CO.	405114	735910	2.7	52	0100	3050	1	B
568	QUANTA, EDGEWATER, BERGEN CO.	404906	735847	3.3	3	102	3090	0	
562	LEVER BROTHERS, EDGEWATER, BERGEN CO.	404901	735841	3.4	53	100	3090	0	

Number of Observations: 37

ATTACHMENT A

AFFIDAVIT

RECEIVED

The purpose of this Affidavit is to obtain an applicability/nonapplicability determination from the New Jersey Department of Environmental Protection pursuant to the Environmental Cleanup Responsibility Act, N.J.S.A. 13:1K-6 et seq.

BUREAU OF INDUSTRIAL SITE EVALUATION

STATE OF)
COUNTY OF) ss. DATE 4/20/91

I, [Name of authorized officer or management official], of full age, being duly sworn according to law make the following statements of fact:

A. Current Owner of the Property for which an Applicability/Nonapplicability Determination is requested.

Name Development, Inc. c/o Parker, Chapin, Flattau & Klimpl, Esqs

Street Address 1211 Avenue of the Americas

Municipality New York State New York Zip Code 10036

Date of Planned Acquisition or Closure or Other Relevant Transaction May 1, 1987

B. Property for which request is being submitted:

Street Address Dietrichs Street

Tax Block(s) 107 Tax Lot(s) 2A - 2L

Municipality Little Ferry County Bergen

State New Jersey Zip Code 07643

C. Describe the transaction for which the applicability/nonapplicability determination is requested (Closing, Selling, etc.), including name and address of the purchaser:

Transfer of Title to Property

To: Team 1 Country Developers, Inc

145 Kinderkamack Road

Hasbrouck, New Jersey 07675

DEP USE ONLY

Notice No.

Fee Paid

ATTACHMENT A-1

D. Operations:

Note: The Property Owner must describe the operations and processes conducted at the site including a list of all the tenants, their operations and processes, occupying any part of the property since December 31, 1983. *(Attach additional sheets if necessary.)*

Name of Business Not Applicable. Site Vacant - No Structures.

Address _____

Municipality _____ County _____

State _____ Zip Code _____ Telephone No. _____

Standard Industrial Classification (SIC) Number Not Applicable

Tax Block(s) _____ Tax Lot(s) _____

Description of Operations and Processes *(Attach additional sheets if necessary.)*

Property has been vacant since mid 1960's.
Prior to this time, the property was the site of a Little Ferry
treatment plant. Subsequent to the plant closure and demolition,
the site was filled with miscellaneous material from various sources.

How is the Building(s) Heated? Not applicable

E. Hazardous Substances or Wastes:

List all types and quantities of hazardous substances or wastes including petroleum products that are generated, manufactured, refined, transported, treated, stored, handled or disposed at the property, both above and below ground which are included in the Department's "List of Hazardous Substances" at Appendix A of N.J.A.C. 7:1E and any amount of any waste substances required to be reported to the Department on special waste manifest forms pursuant to N.J.A.C. 7:26-74, designated as a hazardous waste pursuant to N.J.A.C. 7:26-8, or as otherwise provided by law. *(Attach additional sheets if necessary.)*

None Known

F. Previous owners and history of on-site activities since January 1982.

NAME	*ADDRESS*	*OPERATIONS*
SAME AS PRESENT OWNER		

ATTACHMENT A-2

G. Individual to whom Applicability/Nonapplicability Determination should be addressed:

Name Thomas M. Zinkand Citibank, N.A.

Address 399 Park Avenue City or Town New York

State New York Zip Code 10043 Telephone No. 1-212-559-0615

H. CERTIFICATIONS: an officer of

a. I, Thomas M. Zinkand, hereby certify that I am the ☒ owner ☐ operator (check one) at the above subject property and that the information furnished on this application (and any attachments) is true. I am fully aware that any person who knowingly gives or causes to be given any false information or who fails to comply with the provisions of ECRA or N.J.A.C. 7:1-3 and 4 shall be liable to a penalty of not more than $25,000 for each offense. Furthermore, I am fully aware that any authorized officer or management official who knowingly directs or authorizes the violation of any provisions of ECRA or N.J.A.C. 7:1-3 and 4 shall be personally liable for penalties of not more than $25,000 for each offense. Failure to comply with the provisions of ECRA may be cause for the possible voiding of the transaction.

Signature of Affiant Thomas M Zinkand

Date 4/20/87

Sworn to and Subscribed Before Me
on this 20th
Date of April 19 87

Notary

b. If the owner or operator has claimed that no hazardous substances and wastes are involved in any way at or on the property, the following shall be completed and included in the affidavit:

I have carefully and thoroughly reviewed the List of Hazardous Substances included in Appendix A of N.J.A.C. 7.1E, "Discharges of Petroleum and Other Hazardous Substances" and, after due diligence and any appropriate consultations, have determined that the business operations on property described within this affidavit do not involve the generation, manufacture, refining, transportation, treatment, storage, handling or disposal of hazardous substances above or below ground. I have also determined that the business operations on the property described within this affidavit does not involve any amount of any waste substances required to be reported to the Department on the special waste management pursuant to N.J.A.C. 7:26-7.4, designated as hazardous waste pursuant to N.J.A.C. 7:26-8, or as otherwise provided by law.

Signature of Affiant _____

Date _____

Sworn to and Subscribed Before Me
on this _____
Date of _____ 19 ___

_____
Notary

HAVE YOU ENCLOSED A CERTIFIED CHECK OR MONEY ORDER FOR $100? ☐ YES ☐ NO

ATTACHMENT A-3

ATTACHMENT B

State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF HAZARDOUS WASTE MANAGEMENT
John J. Trela, Ph.D., Acting Director
401 East State St.
CN 028
Trenton, N.J. 08625
609 - 633 - 1408

Mr. Thomas M. Zinkand
Citibank, N.A.
399 Park Avenue
New York, NY 10043

RE: Dietrichs Street
Lot 2A-2L, Block 107
Little Ferry Boro, Bergen County
#N71556

MAY 06 1987

Dear Mr. Zinkand:

This is in response to your letter dated 04/20/87 concerning the applicability of the Environmental Cleanup Responsibility Act (ECRA) to the sale of the above referenced premises. On the basis of the sworn statements set forth in your affidavit, the Department finds that this transaction is not presently subject to the provisions of ECRA.

This decision is made in light of the absence of an industrial establishment as defined within the Standard Industrial Classification numbers covered by the Act. Any inaccuracies in the affidavit or subsequent changes in the facts as stated therein could alter the Department's determination.

The current inapplicability of the Environmental Cleanup Responsibility Act (ECRA) to this transaction does not relieve the above referenced of any responsibilities under any other environmental statutes, regulations or permits.

Moreover, this determination of ECRA nonapplicability does not constitute any finding by the New Jersey Department of Environmental Protection as to the current site condition or the existence or non-existence of any hazards to the environment at this location.

Should you have any further questions regarding this matter, please contact Mark Fisher at (609) 633-7141.

Sincerely,

Michael DeTalvo

Michael DeTalvo, Supervisor
Bureau of ECRA Applicability and
Compliance

E37:dr

ATTACHMENT B

ATTACHMENT C

ECRA-009
12/87

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF HAZARDOUS WASTE MANAGEMENT
INDUSTRIAL SITE EVALUATION ELEMENT
CN 028, TRENTON, N.J. 08625

ENVIRONMENTAL CLEANUP RESPONSIBILITY ACT (ECRA)

APPLICABILITY/NONAPPLICABILITY AFFIDAVIT

The purpose of this Affidavit is to obtain an Applicability/Nonapplicability Determination from the New Jersey Department of Environmental Protection pursuant to the Environmental Cleanup Responsibility Act, N.J. S.A. 13:1K-6 et seq. and N.J.A.C. 7:26B-1.9. Fee is ***$100.***

PLEASE TYPE OR PRINT

Date March 25, 1988

A. Determination of Applicability/Nonapplicability should be mailed to the following:

Name Maiden Lane Corporation, c/o Edward R. Evans, Esq.

Address 8-14 Saddle River Road

City of Town Fair Lawn County Bergen

State New Jersey Zip Code 07410 Tele. No. (201) 794-1700

B. Name of Business Maiden Lane Corporation

Standard Industrial Classification (SIC) Number (if known) N/A

C. Property Location for which request is being transmitted:

Street Address Dietrich Street and Gates Road Tract
Tax Block(s) 107 Tax Lot(s) 2A, B, C, D, F, G & J
Municipality Little Ferry County Bergen
State New Jersey Zip Code 07643

D. Transaction for which the Applicability/Nonapplicability Determination is requested: *(Check appropriate transaction)*

XX Sale of Business and/or Property
____ Business Ceasing Operations
____ Refinancing/Construction Loan
____ Sale of Stock in Corporation
____ Other: *(Explain)* ____

____ Condemnation
____ Bankruptcy
____ Corporate Merger
____ Partnership Situation Change

Date of Planned Transaction: May 2, 1988

Purchaser:

Name Frank Notarangelo and Margaret Notarangelo
Address 70 Pennsylvania Avenue
City or Town Montvale County Bergen
State New Jersey Zip Code 07645

ATTACHMENT C-1

E. Operations:

Note: The Property Owner must completely describe the operations and processes conducted at the site including a list of all tenants, their operations and processes, occupying any part of the property since December 31, 1983. *(Attach additional sheets if necessary.)*

N/A Vacant Land.

F. Current Owner of the Property for which an Applicability/Nonapplicability Determination is requested:

Name Maiden Lane Corporation, c/o Edward R. Evans, Esq.
Street Address 8-14 Saddle River Road Municipality Fair Lawn
State New Jersey Zip Code 07410 Tele. No. (201) 794-1700

G. 1. Previous Owners and history of on-site activities since December 31, 1983 (Attach additional sheets, if necessary):

Name	Address	Operations
Nejer Development, Inc. c/o Parker, Chapin, Flattau & Klimpl, Esqs.	1211 Avenue of the Americas New York, New York 10036	N/A Vacant Land

2. Is this site currently or has this site previously been the subject of any other ECRA review?

XX Previous LNA Application
____Administrative Consent Order
____Active Case
____Negative Declaration
____Approved Cleanup Plan
____No prior ECRA Review

Please submit copies of previous submittals or approvals. Annexed.

H. Hazardous Substances or Wastes: (This information is only required if the facility or business has a subject SIC and a subject transaction.)

List all types and quantities of hazardous substances or wastes including petroleum products that are generated, manufactured, refined, transported, treated, stored, handled or disposed at the property, both above and below ground, which are included in the Department's "List of Hazardous Substances" at Appendix A of N.J.A.C. 7:1E and any amount of any waste substances required to be reported to the Department on special waste manifest forms pursuant to N.J.A.C. 7:26-74, designated as a hazardous waste pursuant to N.J.A.C. 7:26-74, designated as a hazardous waste pursuant to N.J.A.C. 7:26-8, or as otherwise provided by law. *(Attach additional sheets if necessary.)*

N/A.

I. How is the building(s) heated? *(Oil, Gas, Electric)* If Oil, how many tanks? N/A.
Storage Capacity of each N/A Above or below ground N/A.

ATTACHMENT C-2

J. CERTIFICATIONS:

1. The following certification shall be signed by the highest ranking individual at the site with overall responsibility for that site or activity. Where there is no individual at the site with overall responsibility for that site or activity, this certification shall be signed by the individual having responsibility for the overall operation of the site or activity.

I certify under penalty of law that the information provided in this document is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of N.J.S.A. 13:1K-6 et seq., I am personally liable for the penalties set forth at N.J.S.A. 13:1K-8.

Typed/Printed Name _____ Title _____

Signature _____ Date _____

Sworn to and Subscribed Before Me
on this _____
Date of _____ 19 ____

_____
Notary

2. The following certification shall be signed as follows:

   1. For a corporation, by a principal executive officer of at least the level of vice president;
   2. For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or
   3. For a municipality, State, Federal or other public agency, by either a principal executive officer or ranking elected official.

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate, or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of N.J.S.A. 13:1K-6 et seq., I am personally liable for the penalties set forth at N.J.S.A. 13:1K-8.

Typed/Printed Name Maiden Lane Corporation By: Edward Arata Title President, Maiden Lane Corporation

Signature _____ Date March 25, 1988

Sworn to and Subscribed Before Me
on this 25th
Date of March 19 88

Lorraine B. Cupo
Notary

Have you enclosed a check or money order for $100? X **Yes** ____ **No**

My Commission Expires [illegible], 1988

ATTACHMENT C-3

ATTACHMENT D

State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF HAZARDOUS WASTE MANAGEMENT
John J. Trela, Ph.D., Director
401 East State St.
CN 028
Trenton, N.J. 08625
609 - 633 - 1408

Mr. Edward Evans
8-14 Saddle River Rd.
Fair Lawn NJ 07410

APR 05 1988

RE: Dietrich St. & Gates Rd. Tract
Lot 2A, B, C, D, F, G, J, Block 107
Little Ferry Borough, Bergen County
#N81270

Dear Mr. Evans:

This is in response to your letter dated 3/25/88, concerning the applicability of the Environmental Cleanup Responsibility Act (ECRA) to the sale of the above referenced premises. On the basis of the sworn statements set forth in the affidavit signed by Edward Arata, the Department finds that this transaction is not subject to the provisions of ECRA.

This decision is made in light of the absence of an industrial establishment as defined within the Standard Industrial Classification numbers covered by the Act. Any inaccuracies in the affidavit or subsequent changes in the facts as stated therein could alter the Department's determination.

The inapplicability of the Environmental Cleanup Responsibility Act (ECRA) to this transaction does not relieve the above referenced of any responsibilities under any other environmental statutes, regulations or permits.

In addition, this determination of ECRA nonapplicability does not constitute any finding by the New Jersey Department of Environmental Protection as to the current site condition or existence or nonexistence of any hazards to the environment at this location.

Should you have any further questions regarding this matter, please contact me at (609) 633-7141.

Sincerely,

Thomas R Kearns

Michael DeTalvo, Supervisor
Bureau of ECRA Applicability and
Compliance

ATTACHMENT D-2

ATTACHMENT E

JOHNSON SOILS ENGINEERING COMPANY

PROPOSED WAREHOUSE
LITTLE FERRY, N.J.

I. GENERAL: A series of six (6) borings had been made on this site in August 1972, two (2) in January 1984 and three (3) additional borings have now been completed in June 1988. The additional borings were made to fulfill requirements of the Hackensack Meadowlands Development Commission and to verify conditions where these borings were made.

The site lies between Dietrich St., Maiden Lane & the Hackensack River as shown on figure 1, the Boring Location Plan. An easement of the Bergen County Sewer Authority runs through the property. The sewer invert within this easement is at an approximate elevation of -21.

The site lies within an area designated as tidal marsh of marine origin, composed of silty clays deposited during the recession of the Wisconsin glacier. Detailed descriptions of these formations are found in the Engineering Soil Survey of New Jersey.

II. FINDINGS: Based on review of all previous boring data & examination of the boring samples & logs from holes B-9, B-10 & B-11 we have made the following findings:

A. The site has been filled with a miscellaneous fill consisting of cinders, Sand, silt, wood, bricks, etc. The

ATTACHMENT E-1

fill had no inspection or control during placement. In some areas, the upper few feet are compact, however in most of the fill area the material is loose with a minimal allowable bearing capacity. The fill depths range from 2 to 12 feet.

B. Organic SILT and/or PEAT is encountered below the fill material as follows:

B-4	6' to 12' mixed with sand
B-5	9'-13.5'
B-6	8.5'-10.5'
B-7	4'-14'
B-9	2'-6'
B-10	8'-10'
B-11	6'-9'

In addition to the organic material as listed above, slightly organic SAND & SILT was encountered to the limit of exploration at 27 feet in B-7 & B-8.

C. Silty SAND is encountered below the organic layers as follows:

B-1	6.5' to 14'	B-6	10.5'-14'
B-2	7'-14'	B-9	6'-10'
B-3	9'-13.5'	B-10	10'-12'
B-4	12'-18'	B-11	9'-13'

This SAND layer is medium/dense & has an allowable bearing capacity of 3,000 pounds per square foot. The SAND layer was not encountered in B-5, B-7 & B-8.

D. Below the fill, organic & SAND layers of holes 1 through 6, 9,10 & 11, typical varved SILT & CLAY formations of the Meadowlands are encountered. The upper portion of these formations is slightly stiffer & it becomes very soft with increasing depth.

E. Glacial Till formations, consisting of red brown silty, gravelly SAND, were encountered in holes 3,5 & 6 below the varved SILT & CLAY at depths of 85 to 91.5 feet. Practical refusal was found to be at approximately 97 ft.

III. COMMENTS: The grades of the site vary. The estimated existing grade is in the order of 6 to 8 feet. Present regulations require finish floor elevations to be at least +10. Estimated column loads are 60 to 70 kips for the proposed structure.

There are several methods that can be used to develop the site for the proposed building as follows:

1. Excavation of unsuitable material and replacement with shot rock & compacted fill & then using conventional spread & continuous footings.

2. Friction piles--Creosoted Timber

3. Friction piles--untreated timber below water table with concrete filled pipe pile spliced to timber pile.

4. End bearing piles--step tapered, pipe or "H" bearing piles.

5. Total surcharge of entire building area.

6. Dynamic compaction with heavy falling weight.

A discussion of these methods follows:

A. Excavation & replacement -for this procedure a large backhoe is necessary with sufficient pumps to keep the excavation dry. All misc. fill & organic must be removed to the silty SAND layer which is encountered between 6 & 14 ft. below the surface.

The shot rock fill should be compacted in lifts not to exceed 2 feet in thickness. The last 3 feet below footings & slab must be a granular soil fill compacted in one ft. lifts to 95% of maximum density as determined by ASTM D-1557. The compacted fill will support footings based on design loading of 3,000 P.S.F.

For this procedure, provision must be made for disposal of the excavated organic materials, which are unsuitable for use in the building area.

B. Friction piles using creosoted timber will require piles in the order of 55 foot lengths in order to develop a 25 ton pile. It is noted however, that because of downdrag due to the additional fill required to raise grades, the capacity of the pile for design purposes will be in the order of 15 to 20 tons depending on the amount of fill required. Use 20 tons if 2 feet or less of fill is required and 15 tons for more than 2 feet.

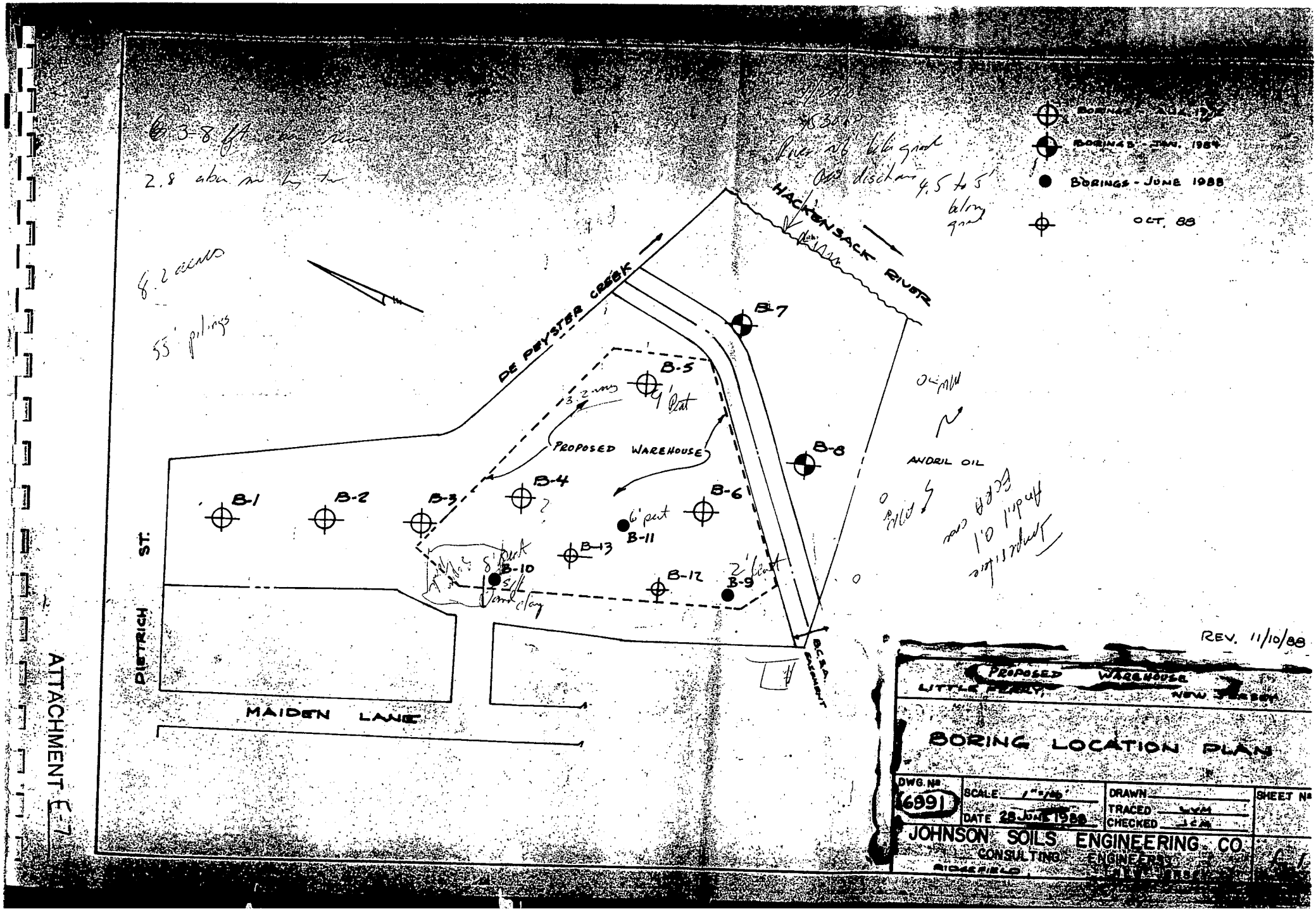
C. Friction piles using untreated timber piles 50 feet in length below water table with a 15 foot splice of concrete filled corrugated pipe pile addition will develop the same loads as paragraph (B) above.

D. End bearing piles would have to be driven to the underlying glacial till or rock at depths in the order of 100 feet ±. These piles can develop bearing capacity up to 100 or more tons depending on section, however for design loads over 40 tons, a full scale load test is required.

E. Total surcharge of entire building area would require additional fill material to be placed & compacted to proposed grade & an additional fill of 10 to 12 feet would be placed and monitored for up to a year or more. When settlement ceases, the surcharge is removed and disposed of, and the proposed structure built on spread & continuous footings using 3,000 PSF design load.

F. Dynamic compaction of the miscellaneous fill with a heavy drop weight is not a viable alternative because of the organic layers below and the proximity of the Bergen County Sewer Authority easement and nearby resisdences.

In summary, a mat or raft foundation is not recommended because of the variation in fill & organic layer thickness with resultant differential settlement. The two methods recommended are a pile foundation or total excavation and replacement.



ATTACHMENT E-7

JOHNSON SOILS ENGINEERING LABORATORY

EXPLORATION · TESTING · DESIGN

225 GRANTWOOD BLVD.
PALISADES PARK, N. J.
(AREA CODE 201) 943-1793

Project Industrial Center of Little Ferry, Little Ferry, N.J.

Landmark Development Corporation

Job No. 3427 Boring No. 1 Date August 9, 1972

BORING LOG		SPOON SAMPLE & CORE DATA		
Depth From-To	Classification of Soil or Rock	No.	Depth From-To	Blows/6" Core Rec.
0-6.5'	Fill - SAND, cinders, gravel, concrete.	1	0-2'	28-28-33-31 LH
		2	2'-4'	18-29-26-30 LH
		3	4'-6'	23-27-20-24 LH
6.5'-14'	Gray fine SAND, some silt.	4	6'-8'	18-17-15-15
		5	8'-10'	8-9-10-11
		6	10'-12'	8-8-11-12
14'-20'	Brown varved SILT, some clay.	7	15'-17'	4-5-7-8
20'-34'	Gray varved CLAY, some silt.	8	20'-22'	5-8-8-9
		9	25'-27'	3-4-4-4
		10	30'-32'	3-3-4-5
	LH = Large Hammer.			

BLOWS ON CASING			
0-1	23	50-51	
1-2	48	51-52	
2-3	42	52-53	
3-4	53	53-54	
4-5	61	54-55	
5-6	42	55-56	
6-7	23	56-57	
7-8	24	57-58	
8-9	27	58-59	
9-10	25	59-60	
10-11	18	60-61	
11-12	20	61-62	
12-13	20	62-63	
13-14	19	63-64	
14-15	23	64-65	
15-16	17	65-66	
16-17	19	66-67	
17-18	22	67-68	
18-19	24	68-69	
19-20	23	69-70	
20-21		70-71	
21-22		71-72	
22-23		72-73	
23-24		73-74	
24-25		74-75	
25-26		75-76	
26-27		76-77	
27-28		77-78	
28-29		78-79	
29-30		79-80	
30-31		80-81	
31-32		81-82	
32-33		82-83	
33-34		83-84	
34-35		84-85	
35-36		85-86	
36-37		86-87	
37-38		87-88	
38-39		88-89	
39-40		89-90	
40-41		90-91	
41-42		91-92	
42-43		92-93	
43-44		93-94	
44-45		94-95	
45-46		95-96	
46-47		96-97	
47-48		97-98	
48-49		98-99	
49-50		99-100	

GROUND WATER

Depth	Hour	Date
6'8"		9 Aug.

Drive Hammer 300 lbs.
18" drop
Spoon Hammer 140 lbs.
30" drop
Casing Size 2½ inch
Spoon Size 2 inch
Core Bit Size ____ inch

ATTACHMENT E-8

JOHNSON SOILS ENGINEERING LABORATORY

EXPLORATION - TESTING - DESIGN

225 GRANTWOOD BLVD.
PALISADES PARK, N. J.
(AREA CODE 201) 943-1793

Project Industrial Center of Little Ferry, Little Ferry, N.J.
Landmark Development Corporation

Job No. 3427 Boring No. 2 Date August 9 & 10, 1972

BORING LOG		SPOON SAMPLE & CORE DATA			BLOWS ON CASING			
Depth From-To	Classification of Soil or Rock	No.	Depth From-To	Blows/ 6" Core Rec.				
0-1'	Topsoil & Vegetation.				0-1	7	50-51	
1'-7'	Fill - sand, gravel, brick, wood.	1	0-2'	2-3-3-4	1-2	8	51-52	
		2	2'-4'	2-4-4-5	2-3	16	52-53	
		3	4'-6'	3-3-4-6	3-4	18	53-54	
7'-11'	Gray fine SAND, some silt.	4	6'-8'	3-5-4-7	4-5	20	54-55	
		5	8'-10'	4-4-6-8	5-6	11	55-56	
11'-14'	Brown F/M SAND, trace of silt.	6	10'-12'	4-6-8-8	6-7	14	56-57	
14'-32'	Brown varved SILT, some clay.	7	15'17'	4-6-7-8	7-8	19	57-58	
		8	20'-22'	4-4-6-6	8-9	18	58-59	
		9	25'-27'	4-5-7-6	9-10	23	59-60	
		10	30'-32'	3-4-4-5	10-11	17	60-61	
					11-12	20	61-62	
					12-13	22	62-63	
					13-14	19	63-64	
					14-15	26	64-65	
					15-16	18	65-66	
					16-17	20	66-67	
					17-18	23	67-68	
					18-19	22	68-69	
					19-20	24	69-70	
					20-21		70-71	
					21-22	WASHED AHEAD	71-72	
					22-23		72-73	
					23-24		73-74	
					24-25		74-75	
					25-26		75-76	
					26-27		76-77	
					27-28		77-78	
					28-29		78-79	
					29-30		79-80	
					30-31		80-81	
					31-32		81-82	
					32-33		82-83	
					33-34		83-84	
					34-35		84-85	
					35-36		85-86	
					36-37		86-87	
					37-38		87-88	
					38-39		88-89	
					39-40		89-90	
					40-41		90-91	
					41-42		91-92	
					42-43		92-93	
					43-44		93-94	
					44-45		94-95	
					45-46		95-96	
					46-47		96-97	
					47-48		97-98	
					48-49		98-99	
					49-50		99-100	

GROUND WATER

Depth	Hour	Date
6'3"		Aug. 9 & 10

Drive Hammer 300 lbs.
18" drop
Spoon Hammer 180 lbs.
30" drop
Casing Size 2½ inch
Spoon Size 2 inch
Core Bit Size ____ inch

ATTACHMENT E-9

JOHNSON SOILS ENGINEERING LABORATORY

EXPLORATION · TESTING · DESIGN

225 GRANTWOOD BLVD.
PALISADES PARK, N. J.
(AREA CODE 201) 943-1793

Project Industrial Center of Little Ferry, Little Ferry, N.J.
Landmark Development Corporation

Job No. 3427 Boring No. 3 Date August 10, 1972

BORING LOG		SPOON SAMPLE & CORE DATA			BLOWS ON CASING			
Depth From-To	Classification of Soil or Rock	No.	Depth From-To	Blows/ 6" Core Rec.				
0-9'	Fill - SAND, brick, wood, gravel, w/trace organic @ 9'.	1	0-2'	4-5-4-5	0-1		50-51	
		2	2'-4'	5-8-7-5	1-2		51-52	
		3	4'-6'	5-2-5-5	2-3		52-53	
		4	6'-8'	2-0-2-3	3-4		53-54	
9'-11'	Gray fine SAND, some silt.	5	8'-10'	2-5-8-10	4-5		54-55	
11'-13'5'	Brown F/M SAND, trace of silt.	6	10'-12'	7-13-10-15	5-6		55-56	
13.5'-30'	Gray-brown varved CLAY, little silt.	7	15'-17'	2-5-7-8	6-7		56-57	
		8	20'-22'	2-3-3-5	7-8		57-58	
		9	25'-27'	1-2-1-1	8-9		58-59	
30'-69'	Gray varved CLAY, trace of silt.	10	30'-32'	0-0-1-0	9-10		59-60	
		11	35'-37'	0-1-0-1	10-11		60-61	
		12	40'-42'	1-0-1-0	11-12		61-62	
		13	45'-47'	0-1-0-0	12-13		62-63	
		14	50'-52'	1-0-0-0	13-14		63-64	
		15	55'-57'	1-0-0-1	14-15		64-65	
	5" casing used to 15'	16	60'-62'	0-0-0-1	15-16		65-66	
		17	65'-67'	1-0-1-0	16-17		66-67	
					17-18		67-68	
					18-19		68-69	
					19-20		69-70	
					20-21		70-71	
					21-22		71-72	
					22-23		72-73	
					23-24		73-74	
					24-25		74-75	
					25-26		75-76	
					26-27		76-77	
					27-28		77-78	
					28-29		78-79	
					29-30		79-80	
					30-31		80-81	
					31-32		81-82	
					32-33		82-83	
					33-34		83-84	
					34-35		84-85	
					35-36		85-86	
					36-37		86-87	
					37-38		87-88	
					38-39		88-89	
					39-40		89-90	
					40-41		90-91	
					41-42		91-92	
					42-43		92-93	
					43-44		93-94	
					44-45		94-95	
					45-46		95-96	
					46-47		96-97	
					47-48		97-98	
					48-49		98-99	
					49-50		99-100	

GROUND WATER

Depth	Hour	Date

Drive Hammer _____ lbs.
_____ drop
Spoon Hammer _____ lbs.
_____ drop
Casing Size _____ inch
Spoon Size _____ inch
Core Bit Size _____ inch

JOHNSON SOILS ENGINEERING LABORATORY

EXPLORATION · TESTING · DESIGN

225 GRANTWOOD BLVD.
PALISADES PARK, N. J.
(AREA CODE 201) 943-1793

Project Industrial Center of Little Ferry, Little Ferry, N.J.

Landmark Development Corporation

Job No. 3427 Boring No. 3 Date August 10, 1972

BORING LOG		SPOON SAMPLE & CORE DATA			BLOWS ON CASING
Depth From-To	Classification of Soil or Rock	No.	Depth From-To	Blows/ 6" Core Rec.	
69'-85'	Red-brown varved CLAY, little silt.	18	70'-72'	1-0-1-0	
		19	75'-77'	1-0-1-1	
		20	80'-82'	1-1-2-2	
85'-91.5'	Red-brown fine SAND, little silt.	21	85'-87'	1-2-5-7	
91.5'-97'	Red-brown SAND & GRAVEL, trace of silt.	22	90'-92'	2-5-11-13	
		23	95'-97'	26-43-54-52	

GROUND WATER		
Depth	Hour	Date
6'	2 PM	10 Aug.

Drive Hammer 300 lbs.
18" drop
Spoon Hammer 140 lbs.
30" drop
Casing Size 5 inch
Spoon Size 2 inch
Core Bit Size ____ inch

BLOWS ON CASING			
0-1		50-51	
1-2		51-52	
2-3		52-53	
3-4		53-54	
4-5		54-55	
5-6		55-56	
6-7		56-57	
7-8		57-58	
8-9		58-59	
9-10		59-60	
10-11		60-61	
11-12		61-62	
12-13		62-63	
13-14		63-64	
14-15		64-65	
15-16		65-66	
16-17		66-67	
17-18		67-68	
18-19		68-69	
19-20		69-70	
20-21		70-71	
21-22		71-72	
22-23		72-73	
23-24		73-74	
24-25		74-75	
25-26		75-76	
26-27		76-77	
27-28		77-78	
28-29		78-79	
29-30		79-80	
30-31		80-81	
31-32		81-82	
32-33		82-83	
33-34		83-84	
34-35		84-85	
35-36		85-86	
36-37		86-87	
37-38		87-88	
38-39		88-89	
39-40		89-90	
40-41		90-91	
41-42		91-92	
42-43		92-93	
43-44		93-94	
44-45		94-95	
45-46		95-96	
46-47		96-97	
47-48		97-98	
48-49		98-99	
49-50		99-100	

ATTACHMENT E-11

JOHNSON SOILS ENGINEERING LABORATORY

EXPLORATION · TESTING · DESIGN

225 GRANTWOOD BLVD.
PALISADES PARK, N. J.
(AREA CODE 201) 943-1793

Project Industrial Center of Little Ferry, Little Ferry, N.J.

Landmark Development Corporation

Job No. 3427 Boring No. 4 Date August 8, 1972

BORING LOG		SPOON SAMPLE & CORE DATA		
Depth From-To	Classification of Soil or Rock	No.	Depth From-To	Blows/ 6" Core Rec.
0-6'	Fill - SAND, gravel, cinders, wood.	1	0-2'	2-2-4-3
		2	2'-4'	2-1-1-4
		3	4'-6'	6-11-9-10
6'-12'	Gray-black organic SILT, mixed with Sand Fill.	4	6'-8'	6-3-1-1
		5	8'-10'	2-1-3-7
		6	10'-12'	6-6-8-7
12'-18'	Gray fine SAND, little silt.	7	15'-17'	6-8-10-11
18'-32'	Gray varved CLAY, little silt.	8	20'-22'	5-5-7-7
		9	25'-27'	5-8-10-10
		10	30'-32'	7-10-10-13

BLOWS ON CASING

0-1	3	50-51	
1-2	6	51-52	
2-3	4	52-53	
3-4	7	53-54	
4-5	11	54-55	
5-6	8	55-56	
6-7	13	56-57	
7-8	13	57-58	
8-9	18	58-59	
9-10	19	59-60	
10-11	11	60-61	
11-12	14	61-62	
12-13	16	62-63	
13-14	23	63-64	
14-15	24	64-65	
15-16	16	65-66	
16-17	19	66-67	
17-18	23	67-68	
18-19	27	68-69	
19-20	28	69-70	
20-21	16	70-71	
21-22	19	71-72	
22-23	23	72-73	
23-24	21	73-74	
24-25	28	74-75	
25-26	22	75-76	
26-27	27	76-77	
27-28	31	77-78	
28-29	34	78-79	
29-30	39	79-80	
30-31		80-81	
31-32		81-82	
32-33		82-83	
33-34		83-84	
34-35		84-85	
35-36		85-86	
36-37		86-87	
37-38		87-88	
38-39		88-89	
39-40		89-90	
40-41		90-91	
41-42		91-92	
42-43		92-93	
43-44		93-94	
44-45		94-95	
45-46		95-96	
46-47		96-97	
47-48		97-98	
48-49		98-99	
49-50		99-100	

GROUND WATER

Depth	Hour	Date
7'4"		8 Aug.

Drive Hammer 300 lbs.
18" drop
Spoon Hammer 140 lbs.
30" drop
Casing Size 2½ inch
Spoon Size 2 inch
Core Bit Size ____ inch

ATTACHMENT E-12

JOHNSON SOILS ENGINEERING LABORATORY

EXPLORATION - TESTING - DESIGN

225 GRANTWOOD BLVD.
PALISADES PARK, N. J.
(AREA CODE 201) 943-1793

Project Industrial Center of Little Ferry, Little Ferry, N.J.

Landmark Development Corporation

Job No. 3427 Boring No. 5 Date August 9, 1972

BORING LOG		SPOON SAMPLE & CORE DATA		
Depth From-To	Classification of Soil or Rock	No.	Depth From-To	Blows/ 6" Core Rec.
0-8'	Fill - SAND, wood, brick, gravel.	1	0-1'6"	1-23-72
		2	2'4'	3-6-6-7
		3	4'-6'	8-12-9-7
		4	6'-8'	4-7-13-24
8'-9'	Fill - brown S'ND, little silt.			
9'-13.5'	Gray organic SILT & PEAT.	5	8'-10'	9-4-2-2
		6	10'-12'	2-3-3-3
13.5'-38'	Gray-brown varved SILT, some clay, trace of sand.	7	15'-17'	2-3-5-6
		8	20'-22'	1-0-1-0
		9	25'-27'	1-1-0-1
		10	30'-32'	0-1-0-1
		11	35'-37'	1-0-0-1
38'-43'	Gray fine SAND, trace of silt.	12	40'42'	6-5-9-10
43'-60'	Gray varved CLAY, some silt.	13	45'-47'	2-1-2-2
		14	50'-52'	0-1-1-0
		15	55'-57'	1-0-1-0

GROUND WATER

Depth	Hour	Date

Drive Hammer _____ lbs.

_____ drop

Spoon Hammer _____ lbs.

_____ drop

Casing Size _____ inch

Spoon Size _____ inch

Core Bit Size _____ inch

BLOWS ON CASING

0-1		50-51	
1-2		51-52	
2-3		52-53	
3-4		53-54	
4-5		54-55	
5-6		55-56	
6-7		56-57	
7-8		57-58	
8-9		58-59	
9-10		59-60	
10-11		60-61	
11-12		61-62	
12-13		62-63	
13-14		63-64	
14-15		64-65	
15-16		65-66	
16-17		66-67	
17-18		67-68	
18-19		68-69	
19-20		69-70	
20-21		70-71	
21-22		71-72	
22-23		72-73	
23-24		73-74	
24-25		74-75	
25-26		75-76	
26-27		76-77	
27-28		77-78	
28-29		78-79	
29-30		79-80	
30-31		80-81	
31-32		81-82	
32-33		82-83	
33-34		83-84	
34-35		84-85	
35-36		85-86	
36-37		86-87	
37-38		87-88	
38-39		88-89	
39-40		89-90	
40-41		90-91	
41-42		91-92	
42-43		92-93	
43-44		93-94	
44-45		94-95	
45-46		95-96	
46-47		96-97	
47-48		97-98	
48-49		98-99	
49-50		99-100	

ATTACHMENT E-13

JOHNSON SOILS ENGINEERING LABORATORY

EXPLORATION - TESTING - DESIGN

225 GRANTWOOD BLVD.
PALISADES PARK. N. J.
(AREA CODE 201) 943-1793

Project Industrial Center of Little Ferry, Little Ferry, N.J.

Landmark Development Corporation

Job No. 3427 Boring No. 5 Date August 9, 1972

BORING LOG		SPOON SAMPLE & CORE DATA			BLOWS ON CASING
Depth From-To	Classification of Soil or Rock	No.	Depth From-To	Blows/ 6" Core Rec.	
60'-91.5'	Red-brown varved CLAY.	16	60'-62'	1-2-2-2	
		17	65'-67'	1-1-1-1	
		18	70'-72'	0-1-1-1	
		19	75'-77'	0-1-1-0	
		20	80'-82'	1-2-2-2	
		21	85'-87'	1-0-2-3	
		22	90'-92'	1-1-2-4	
91.5'-97'	Red-brown SAND, little silt, trace of gravel.	23	95'-97'	8-17-31-86	
	5" casing used to 15'.				

BLOWS ON CASING

0-1		50-51	
1-2		51-52	
2-3		52-53	
3-4		53-54	
4-5		54-55	
5-6		55-56	
6-7		56-57	
7-8		57-58	
8-9		58-59	
9-10		59-60	
10-11		60-61	
11-12		61-62	
12-13		62-63	
13-14		63-64	
14-15		64-65	
15-16		65-66	
16-17		66-67	
17-18		67-68	
18-19		68-69	
19-20		69-70	
20-21		70-71	
21-22		71-72	
22-23		72-73	
23-24		73-74	
24-25		74-75	
25-26		75-76	
26-27		76-77	
27-28		77-78	
28-29		78-79	
29-30		79-80	
30-31		80-81	
31-32		81-82	
32-33		82-83	
33-34		83-84	
34-35		84-85	
35-36		85-86	
36-37		86-87	
37-38		87-88	
38-39		88-89	
39-40		89-90	
40-41		90-91	
41-42		91-92	
42-43		92-93	
43-44		93-94	
44-45		94-95	
45-46		95-96	
46-47		96-97	
47-48		97-98	
48-49		98-99	
49-50		99-100	

GROUND WATER

Depth	Hour	Date
6'	4 PM	9 Aug.

Drive Hammer 300 lbs.
18" drop
Spoon Hammer 140 lbs.
30" drop
Casing Size 5 inch
Spoon Size 2 inch
Core Bit Size ____ inch

ATTACHMENT E-14

JOHNSON SOILS ENGINEERING LABORATORY

EXPLORATION - TESTING - DESIGN

225 GRANTWOOD BLVD.
PALISADES PARK, N. J.
(AREA CODE 201) 943-1793

Project Industrial Center of Little Ferry, Little Ferry, N.J.

Landmark Development Corporation

SHEET 1 OF 2

Job No. 3427 Boring No. 6 Date August 8 & 9, 1972

BORING LOG		SPOON SAMPLE & CORE DATA			BLOWS ON CASING			
Depth From-To	Classification of Soil or Rock	No.	Depth From-To	Blows/ 6" Core Rec.				
0'-8.5'	Fill - wood, sand, gravel, organic SILT.	1	0'1"-10"	17-21-37-71 / 2"	0-1		50-51	
		2	2'-2'9"	60 - 100 / 3"	1-2		51-52	
		3	4'-4'6"	100 / 6"	2-3		52-53	
		4	6'-8'	9-1-2-7	3-4		53-54	
8.5'-10.5'	Black, organic SILT.	5	8'-10'	1-1-1-2	4-5		54-55	
10.5'-14'	Gray fine SAND, some silt.	6	10'-12'	4-7-9-10	5-6		55-56	
14'-30'	Gray-brown CLAY, little silt.	7	15'-17'	3-4-6-7	6-7		56-57	
		8	20'-22'	1-2-4-5	7-8		57-58	
		9	25'-27'	0-1-2-4	8-9		58-59	
30'-80'	Gray CLAY, little silt.	10	30'-32'	0-0-1-0	9-10		59-60	
		11	35'-37'	1-0-0-1	10-11		60-61	
		12	40'-42'	0-0-1-0	11-12		61-62	
		13	45'-47'	0-0-0-0	12-13		62-63	
		14	50'-52'	0-0-0-0	13-14		63-64	
		15	55'-57'	0-0-0-0	14-15		64-65	
		16	60'-62'	1-0-0-0	15-16		65-66	
					16-17		66-67	
					17-18		67-68	
					18-19		68-69	
					19-20		69-70	
					20-21		70-71	
					21-22		71-72	
					22-23		72-73	
					23-24		73-74	
					24-25		74-75	
					25-26		75-76	
					26-27		76-77	
					27-28		77-78	
					28-29		78-79	
					29-30		79-80	
					30-31		80-81	
					31-32		81-82	
					32-33		82-83	
					33-34		83-84	
					34-35		84-85	
					35-36		85-86	
					36-37		86-87	
					37-38		87-88	
					38-39		88-89	
					39-40		89-90	
					40-41		90-91	
					41-42		91-92	
					42-43		92-93	
					43-44		93-94	
					44-45		94-95	
					45-46		95-96	
					46-47		96-97	
					47-48		97-98	
					48-49		98-99	
					49-50		99-100	

GROUND WATER

Depth	Hour	Date

Drive Hammer _____ lbs.

_____ drop

Spoon Hammer _____ lbs.

_____ drop

Casing Size _____ inch

Spoon Size _____ inch

Core Bit Size _____ inch

ATTACHMENT E-15

JOHNSON SOILS ENGINEERING LABORATORY

EXPLORATION · TESTING · DESIGN

225 GRANTWOOD BLVD.
PALISADES PARK. N. J.
(AREA CODE 201) 943-1793

Project Industrial Center of Little Ferry, Little Ferry, N.J.

Landmark Development Corporation

SHEET 1 OF 2

Job No. 3427 Boring No. 6 Date August 8 & 9, 1972

BORING LOG		SPOON SAMPLE & CORE DATA		
Depth From-To	Classification of Soil or Rock	No.	Depth From-To	Blows/ 6" Core Rec.
0-8.5'	Fill - wood, sand, gravel, organic SILT.	1	0'1"-10"	17-21-37-71/2"
		2	2'-2'9"	60 - 100/3"
		3	4'-4'6"	100/6"
		4	6'-8'	9-1-2-7
8.5'-10.5'	Black, organic SILT.	5	8'-10'	1-1-1-2
10.5'-14'	Gray fine SAND, some silt.	6	10'-12'	4-7-9-10
14'-30'	Gray-brown CLAY, little silt.	7	15'-17'	3-4-6-7
		8	20'-22'	1-2-4-5
		9	25'-27'	0-1-2-4
30'-80'	Gray CLAY, little silt.	10	30'-32'	0-0-1-0
		11	35'-37'	1-0-0-1
		12	40'-42'	0-0-1-0
		13	45'-47'	0-0-0-0
		14	50'-52'	0-0-0-0
		15	55'-57'	0-0-0-0
		16	60'-62'	1-0-0-0

BLOWS ON CASING

0-1		50-51	
1-2		51-52	
2-3		52-53	
3-4		53-54	
4-5		54-55	
5-6		55-56	
6-7		56-57	
7-8		57-58	
8-9		58-59	
9-10		59-60	
10-11		60-61	
11-12		61-62	
12-13		62-63	
13-14		63-64	
14-15		64-65	
15-16		65-66	
16-17		66-67	
17-18		67-68	
18-19		68-69	
19-20		69-70	
20-21		70-71	
21-22		71-72	
22-23		72-73	
23-24		73-74	
24-25		74-75	
25-26		75-76	
26-27		76-77	
27-28		77-78	
28-29		78-79	
29-30		79-80	
30-31		80-81	
31-32		81-82	
32-33		82-83	
33-34		83-84	
34-35		84-85	
35-36		85-86	
36-37		86-87	
37-38		87-88	
38-39		88-89	
39-40		89-90	
40-41		90-91	
41-42		91-92	
42-43		92-93	
43-44		93-94	
44-45		94-95	
45-46		95-96	
46-47		96-97	
47-48		97-98	
48-49		98-99	
49-50		99-100	

GROUND WATER

Depth	Hour	Date

Drive Hammer _____ lbs.

_____ drop

Spoon Hammer _____ lbs.

_____ drop

Casing Size _____ inch

Spoon Size _____ inch

Core Bit Size _____ inch

ATTACHMENT E-16

JOHNSON SOILS ENGINEERING LABORATORY

EXPLORATION - TESTING - DESIGN

225 GRANTWOOD BLVD.
PALISADES PARK, N. J.
(AREA CODE 201) 943-1793

Project Industrial Center of Little Ferry, Little Ferry, N.J.
Landmark Development Corporation

Job No. 3427 Boring No. 6 Date August 8 & 9, 1972

BORING LOG		SPOON SAMPLE & CORE DATA		
Depth From-To	Classification of Soil or Rock	No.	Depth From-To	Blows/ 6" Core Rec.
		17	65'-67'	1-0-1-0
		18	70'-72'	1-0-0-1
		19	75'-77'	1-0-1-1
80'-88'5'	Red-brown CLAY, little silt.	20	80'-82'	1-1-2-3
		21	85'-87'	0-2-2-3
88.5'-97'	Red-brown SAND, some gravel, little silt.	22	90'-92'	14-13-23-42
		23	95'-97'	20-41-58-76
	5" casing used to 15'.			

GROUND WATER

Depth	Hour	Date
5'3"	9 AM	Aug. 9

Drive Hammer 300 lbs.
18" drop
Spoon Hammer 140 lbs.
30" drop
Casing Size 5 inch
Spoon Size 2 inch
Core Bit Size ____ inch

BLOWS ON CASING

0-1		50-51	
1-2		51-52	
2-3		52-53	
3-4		53-54	
4-5		54-55	
5-6		55-56	
6-7		56-57	
7-8		57-58	
8-9		58-59	
9-10		59-60	
10-11		60-61	
11-12		61-62	
12-13		62-63	
13-14		63-64	
14-15		64-65	
15-16		65-66	
16-17		66-67	
17-18		67-68	
18-19		68-69	
19-20		69-70	
20-21		70-71	
21-22		71-72	
22-23		72-73	
23-24		73-74	
24-25		74-75	
25-26		75-76	
26-27		76-77	
27-28		77-78	
28-29		78-79	
29-30		79-80	
30-31		80-81	
31-32		81-82	
32-33		82-83	
33-34		83-84	
34-35		84-85	
35-36		85-86	
36-37		86-87	
37-38		87-88	
38-39		88-89	
39-40		89-90	
40-41		90-91	
41-42		91-92	
42-43		92-93	
43-44		93-94	
44-45		94-95	
45-46		95-96	
46-47		96-97	
47-48		97-98	
48-49		98-99	
49-50		99-100	

BORING LOG # 7 Sheet 1 of 1

ect Proposed Townhouses-Little Ferry,NJ-Boswell Engr Job # 5594

e January 5,1984

Sample #	Sample Spoon Blows /6"	Casing Blows/ft.	DESCRIPTION
1	6-3-		Fill- Sand, Silt, Cinders w/wood & metal
	2-3		
2	3-3-		
	2-3		0-4'
3	1-2-		gr. organic silt
	1-2		
4	2-1-		
	1-1		
5	2-1-		
	2-1		
6	1-1-		
	2-3		4'-14'
7	3-3-		gr. fine SAND & silt, trace organic decreasing with depth
	5-6		
8	WOH-1-		
	2-3		
9	4-5-		14'-27'
	5-6		

Remarks: WOH= Weight of Hammer

Depth to Water 3' Date 1/5/84

Driller WARREN GEORGE INC.

Casing Hammer Wgt. _____; Drop _____

Spoon Hammer Wgt. 140# ;Drop 30"

Casing size _____; Spoon size 2"

ATTACHMENT E-18

BORING LOG # 8 Sheet 1 of 1

Project Proposed Townhouses-Little Ferry,NJ-Boswell Engr Job # 5594

Date January 5,1984

Depth, Feet	Sample #	Sample Spoon Blows /6"	Casing Blows/ft.	DESCRIPTION
	1	3-2-		
		2-2		
	2	3-5-		
		7-6		
5	3	4-5-		
		5-3		
	4	50-57		
		5-6-		
	5	6-5		
10		6-4-		
	6	4-5		
				Fill-Sand, silt, brick cinders w/wood & metal (timber @6'-7')
				0-12'
15	7	WOH-1-		
		2-2		gr. SILT, some fine Sand, trace organic
20	8	1-1-		
		1-2		
25	9	2-1-		
		3-3		
				12'-27'
30				
35				
40				

Remarks: WOH= Weight of Hammer

Depth to Water 4' Date 1/5/84

Driller WARREN GEORGE INC.

Casing Hammer Wgt. _____; Drop _____

Spoon Hammer Wgt. 140#; Drop 30"

Casing size _____; Spoon size 2"

ATTACHMENT E-19

BORING LOG # 9 Sheet 1 of 1

Project Proposed Warehouse, Notorangelo, Little Ferry, NJ Job # 6991

Date June 21, 1988

Depth, Feet	Sample #	Sample Spoon Blows /6"	Casing Blows/ft.	DESCRIPTION
	1	100/3"		Mic. Fill-SAND, SILT, BRICKS & CINDERS 0-2'
	2	4-3-3-3		Black Organic SILT & PEAT 2'-6'
5	3	1-4-5-7		
	4	15-21-24-27		Brown fine SAND, some silt 6'-10'
	5	14-23-27-29		
10	6	5-5-6-6		Dark gray varved SILT & CLAY, trace of fine sand
15	7	4-5-5-5		
20	8	3-4-4-4		
25	9	WOH-1-1-1		
30	10	WOH-1-		
35	11	1-1-1-1		10'-37'
40				

Remarks: WOH= Weight of Hammer

Depth to Water 7' Date 6/21/88

Driller FRANK GREGORY INC.

Casing Hammer Wgt. ____; Drop ____

Spoon Hammer Wgt. 140#; Drop 30"

Casing size ____; Spoon size 2"

ATTACHMENT E-20

BORING LOG # 10 Sheet 1 of 1

Project Proposed Warehouse, Notorangelo, Little Ferry, NJ Job # 6991

Date June 22,1988

Depth, Feet	Sample #	Sample Spoon Blows /6"	Casing Blows/ft.	DESCRIPTION
	1	7-100		Misc. Fill-SAND, SILT, GRAVEL, BROKEN CONCRETE 0-6'
5	2	14-4-5-13		Gray fine/medium SAND, little silt 6'-8'
				Black organic SILT & PEAT 8'-10'
10	3	11-9-12-13		Gray fine/medium SAND & SILT 10'-12'
				Dark gray varved SILT & CLAY, trace of fine sand
15	4	4-6-5-6		
20	5	4-5-6-6		
25	6	3-4-8-4		
30	7	5-6-6-7		
35	8	4-5-4-4		12'-27'
40				

Remarks:

Depth to Water 7' Date 6/22/88

Driller FRANK GREGORY INC.

Casing Hammer Wgt. _____; Drop _____

Spoon Hammer Wgt. 140# ;Drop 30"

Casing size _____; Spoon size 2"

ATTACHMENT E-21

JOHNSON SOILS ENGINEERING

BORING LOG # 11 Sheet 1 of 1

Project Proposed Warehouse, Notorangelo, Little Ferry, NJ Job # 6991

Date June 27, 1988

Depth, Feet	Sample #	Sample Spoon Blows /6"	Casing Blows/ft.	DESCRIPTION
	1	9-14-20-21		Misc. Fill: SAND, SILT, GRAVEL
	2	9-10-11-14		
5	3	3-3-3-1		0-6'
	4	1-3-5-6		Black PEAT & organic SILT
	5	4-4-5-6		6'-9'
10	6	4-6-6-6		Gray brown fine/medium SAND & SILT, trace clay & organic
				9'-13'
15	7	4-1-3-5		Dark gray varved SILT & CLAY, trace of fine Sand
20	8	4-5-5-6		
25	9	4-4-5-5		
30	10	6-6-5-6		
35	11	4-5-5-5		13'-37'
40				

Remarks:

Depth to Water 8' Date 6/27/88

Driller FRANK GREGORY INC.

Casing Hammer Wgt. ____; Drop ____

Spoon Hammer Wgt. 140# ; Drop 30"

Casing size ____; Spoon size 2"

ATTACHMENT E-22

ATTACHMENT F

Form ADM-012

02-30-18

MEMO

NEW JERSEY STATE DEPARTMENT OF ENVIRONMENTAL PROTECTION

TO File DATE 1/2/89

FROM David Beaman

SUBJECT Dietrich St & Gates Rd Tract.

The aerial photographs reviewed in Trenton reveal that the subject site was not a landfill since at least 1940. The site is probably confused with a fill site to the north.

ATTACHMENT F

ATTACHMENT G

Borough of Little Ferry

NE KATHERINE STREET • LITTLE FERRY, N. J. 07643
(201) 641-9234

LOUIS A. TEDESCO, JR.
MAYOR

MARCO SAVINO
ADMINISTRATOR/TREASURER

February 22, 1989

12-30-18

State of N.J.
Dept. of Environmental Protection
Div. of Hazardous Waste Management
402 E. State St.
CN 028
Trenton, N.J. 08625

Att: Mr. Michael DeTalvo, Supervisor
Bureau of ECRA Applicability and
Compliance

Re: Dietrich Industrial
Block 107
Lots 2A,B,C,D,F,G,J

Dear Mr. DeTalvo:

The above-referenced applicant has sent us a copy of a letter which you sent to Mr. Edward Evans on April 5, 1988 concerning the above-captioned property. We are enclosing a copy of this letter for your ready reference.

Please be advised that, sometime in the past, this was the site of a sewage treatment plant and various chemicals were dumped on this site. It has come to our attention that test borings were made but they were made in only one place.

We would greatly appeciate any assistance you can render in this matter and hopefully furnishing us with same prior to our next workshop meeting, which will be on March 15, 1989.

Thanking you in advance for your anticipated cooperation with regard to the above, I remain,

Very truly yours,

Mary C. Fiant

Mary C. Fiant, Clerk
Planning Board

cc: Planning Board

ATTACHMENT 6

ATTACHMENT H

Borough of Little Ferry

ONE KATHERINE STREET • LITTLE FERRY, N. J. 07643
(201) 641-9234

LOUIS A. TEDESCO, JR.
MAYOR
MARCO SAVINO
ADMINISTRATOR/TREASURER

February 28, 1989

Mr. David Beeman
Div. of Hazardous Waste Management
Metro Enforcement
2 Babcock Place
West Orange, N.J. 07052

Re: Dietrich Industrial
Block 107
Lots 2A,B,C,D,F,G,J

Dear Mr. Beeman:

In accordance with our conversation of this date, I understand that the above matter has been turned over to you because it is not under ECRA's jursidiction.

As you know, the above-captioned property was the site of a sewer plant operated by the Borough between approximately 1930 and 1957.

For your information, I am enclosing a copy of a recent study on Soils Investigation submitted by Johnson Soils Engineering Co.

We would appreciate hearing from you prior to our workshop meeting on February 15th or prior to our public meeting which will be on February 22nd.

Thanking you in advance for your cooperation, I remain.

Very truly yours,

Mary C. Fiant

Mary C. Fiant, Clerk
Planning Board

James Basico
56 Marion Court
Little Ferry
641-6276

Employee

ATTACHMENT H

ATTACHMENT I

For: Boswell Engineering
South Hackensack, NJ

Soils Investigation

Notarangelo Property
Little Ferry, NJ

By: Lois A. Spagnola
Allied Environmental
Industries Corporation

271 ROUTE 46 WEST • SUITE D201 • FAIRFIELD, NEW JERSEY 07006
PHONE: (201) 808-1755 • FAX: (201) 808-0694

ATTACHMENT I-1

Table of Contents

ATTACHMENT I-2

ALLIED ENVIRONMENTAL INDUSTRIES CORP

April 14, 1989

Mr. Kevin Boswell
BOSWELL ENGINEERING CO.
330 Phillips Avenue
South Hackensack, NJ 07606

Dear Mr. Boswell:

The sampling as discussed was performed on April 11, 1989. The following is a report of the analytical results of the sampling.

Samples were taken from seven (7) locations (addendum I - Site Map). Groundwater was discovered at approximately four (4) feet below grade, except for Location 1, where it was found to be approximately six (6) feet below grade. Therefore, samples include a composite of soils above and below groundwater level encountered during sampling. Because petroleum hydrocarbons (PHC) will float on water, it is believed that any PHC results will be a good indication of the order of magnitude of the problem. Two (2) samples were taken from Location 1A in order to determine whether there is a discrepancy in contamination levels at greater depths.

Volatile Organic Compounds (VOC) were also sampled for because they are often indicative of contamination which could seriously degrade the quality of groundwater. The New Jersey Department of Environmental Protection (NJDEP) standard requires that samples for VOC's be taken for at least two (2) feet below ground. This standard was met for the purpose of this report.

The property is overgrown, with no visible signs of dumping; however, construction debris and rubbish were found in Locations 4A-7A.

Table 1 lists all sampling results. There were no VOC's detected at any of the sample locations. The PHC results detected to 514 milligrams per kilogram (mg/kg). The highest level of PHC's was found in the area closest to the Hackensack

271 ROUTE 46 WEST • SUITE D201 • FAIRFIELD, NEW JERSEY 07006
PHONE: (201) 808-1755 • FAX: (201) 808-0694

ATTACHMENT I-3

Mr. Kevin Boswell
BOSWELL ENGINEERING CO.
330 Phillips Avenue
South Hackensack, NJ 07606

River. It should also be noted that any asphalt in the samples (asphalt was encountered in much of the debris) would show up as PHC in the analytical results.

The minimal levels of PHC's are probably the result of these factors:

- PHC's are in fact typical in a body of water such as the Hackensack River that is tidal in this area.
- The former presence of above ground oil storage tanks to the south of the property.
- The presence of contaminated debris on the site.

The PHC results found were relatively low and are most probably present in this and all sites fronting the Hackensack River and are the result of years of tidal action/flooding by the Hackensack River. The results are below the levels which the NJDEP uses to determine whether oil-contaminated soil can be disposed of in state, which is 30,000 mg/kg. Typically in cases such as this, the NJDEP would not require remediation of the soils because the area would become recontaminated as a result of continuous flooding by the Hackensack River. Based on site inspections, soil boring, and analytical results, it is the opinion of Allied Environmental Industries Corporation that this property is of minor environmental concern.

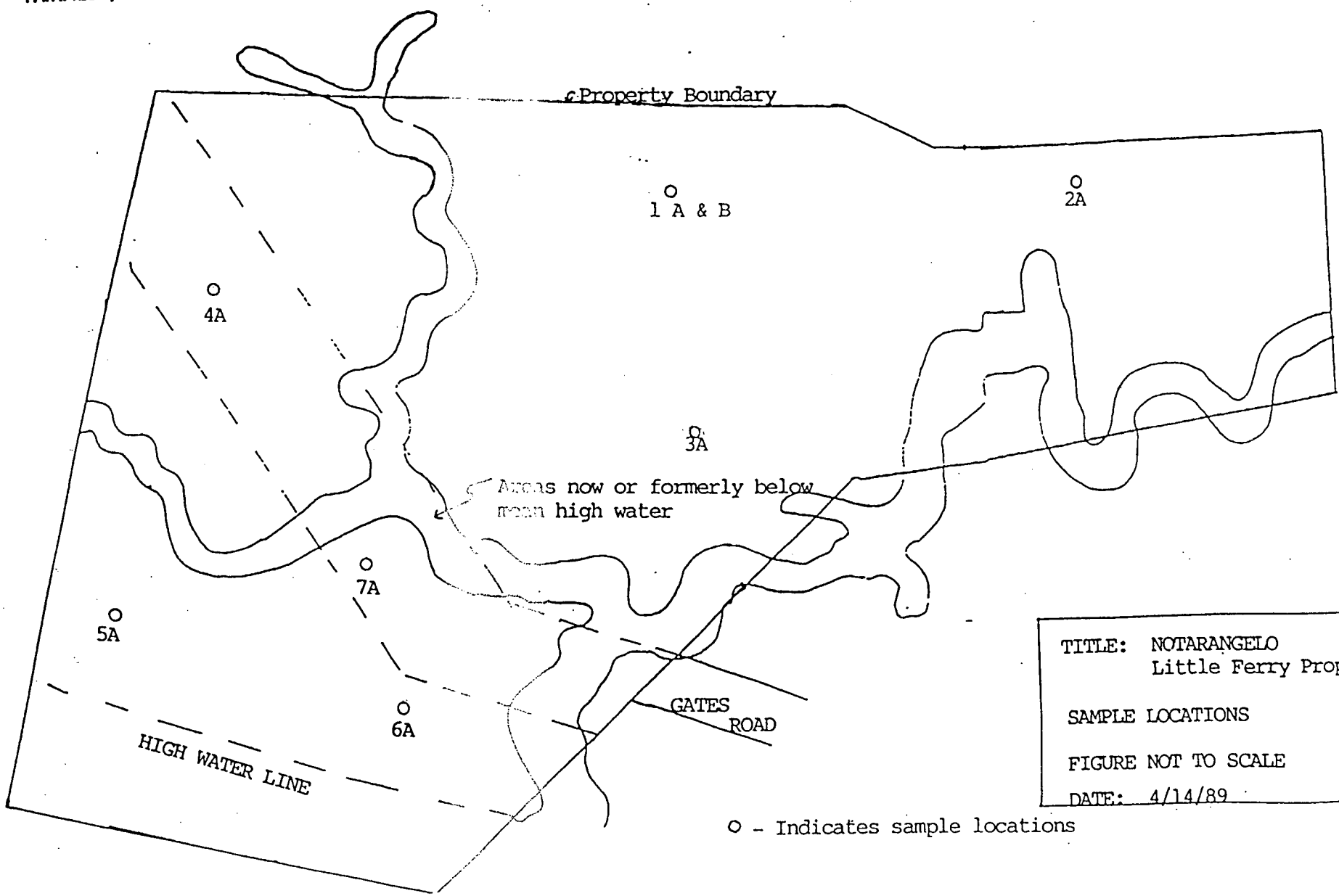
Very truly yours,

Lois A. Spagnola

LAS/pjw

ATTACHMENT I-4

ALLIED ENVIRONMENTAL INDUSTRIES CORP.
271 ROUTE 46 WEST • SUITE D201
FAIRFIELD, NEW JERSEY 07006



ATTACHMENT I-5

Table 1

Sample Results

Sample #	Composite Depth	Analysis Conducted	Results
LFS 1A	0'-4'	PHC	ND
		VOC	ND
LFS 1B	0'-6'	PHC	ND
		VOC	ND
LFS 2A	0'-4'	PHC	15mg/kg
		VOC	ND
LFS 3A	0'-4'	PHC	167mg/kg
		VOC	ND
LFS 4A	0'-4'	PHC	20 mg/kg
		VOC	ND
LFS 5A	0'-4'	PHC	30 mg/kg
		VOC	ND
LFS 6A	0'-4'	PHC	ND
		VOC	ND
LFS 7A	0'-4'	PHC	514 mg/kg
		VOC	ND

ATTACHMENT I-6

ALLIED ENVIRONMENTAL

Veritech Laboratory
Log Sheet

LAB NO: 4130-36

Date Received: 4/12/89 Received By: SG

Date Completed: 4/12/89 COC No.: 041289-1

Date Reported: 4/13/89 NJDEP Laboratory No. 14622

Invoice No.:

Client: ALLIED ENVIRONMENTAL Project No.: NOTARANGELO HACKENSACK, NJ

Address: 271 RT.46 WEST, SUITE D201, FAIRFIELD, NJ 07006

Client Contact: LOIS SPAGNOLA

Phone No.: 808-1755 Invoice To: SAME

Results Needed By: 4/14/89 Samplers:

Sample Matrix: Liquid( ) Solid(X) Sludge( ) Mixed( )

Sample Type: Wastewater( ) Product( ) Groundwater( )
Soil(X) Waste( )

Sample For: Product QA/QC( ) Wastewater( ) ECRA( ) RCRA( )

Deliverables: Results Only(X) Tier II( )

NOTES:

This report is a true report of results obtained from our tests of this material. In lieu of a formal contract document the total aggregate liability of Veritech to all parties shall not exceed Veritech's total fee for analytical services rendered.

Stanley Gilewicz
Laboratory Manager

5.

ATTACHMENT I-7

AEIC ALLIED ENVIRONMENTAL INDUSTRIES CORP

FILE

LAS: Notarangelo.

April 21, 1989

Mr. Kevin Boswell
BOSWELL ENGINEERING CO.
330 Phillips Avenue
South Hackensack, NJ 07606

Re: April 14, 1989: Notarangelo Property
Little Ferry, New Jersey

Dear Mr. Boswell,

I offer the following information as additions to the above referenced site report:

Addendum I

Quality control for sampling performed. Please note that all NJDEP standards were met.

Addendum II

My resume and qualifications. Also note that I am a recognized expert in hazardous and non-hazardous waste site remediation, most recently in trial before the Honorable William H. Walls, Superior Court, County of Essex, in the case of "Juno vs. Simon," Docket no. W41201-88E.

Should you require additional information, please do not hesitate to contact me at (201) 808-1755.

Very truly yours,

Lois A. Spagnola

LAS/pjw

cc: William Fourgerel
Frank Rusch

271 ROUTE 46 WEST • SUITE D201 • FAIRFIELD, NEW JERSEY 07006
PHONE: (201) 808-1755 • FAX: (201) 808-0694

ATTACHMENT I-8

ATTACHMENT J

Let's protect our earth

State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF HAZARDOUS WASTE MANAGEMENT
CN 028
Trenton, N.J. 08625-0028
(609) 633-1408
Fax # (609) 633-1454

March 22, 1991

Frank Notarangelo
Notarangelo Carting
251 2nd Street
Saddlebrook, New Jersey

Re: NJDEP Investigation of Block 107, Lots 2.01 and 17,
Little Ferry, New Jersey

Dear Mr. Notarangelo:

Under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980 and the Superfund Amendments Reauthorization Act (SARA) of 1986, the U.S. Environmental Protection Agency (USEPA) has been granted the authority to investigate known and suspected releases to the environment. This authority has been conferred to the New Jersey Department of Environmental Protection (NJDEP) under a grant from the USEPA.

A requirement of the investigative process is for the NJDEP, Bureau of Planning and Assessment to conduct a Pre-Sampling Assessment of your facility to determine if any hazardous conditions exist, and to assess if environmental sampling is warranted for your facility.

This Bureau intends to conduct a Pre-Sampling Assessment of your facility. As per my March 21, 1991 phone discussion with Bill Fourgerel, I will contact Lois Spagnola on March 25, 1991 to arrange a date.

ATTACHMENT J-1

If you have any further questions please feel free to contact me at (609) 584-4332.

Thank you for your anticipated cooperation.

Sincerely,

KSH

Karen Hiering
HSMS IV
NJDEP, Division of Hazardous Waste Management, Bureau of Planning and Assessment

KH:mz

ATTACHMENT I-2